

FIG. 2

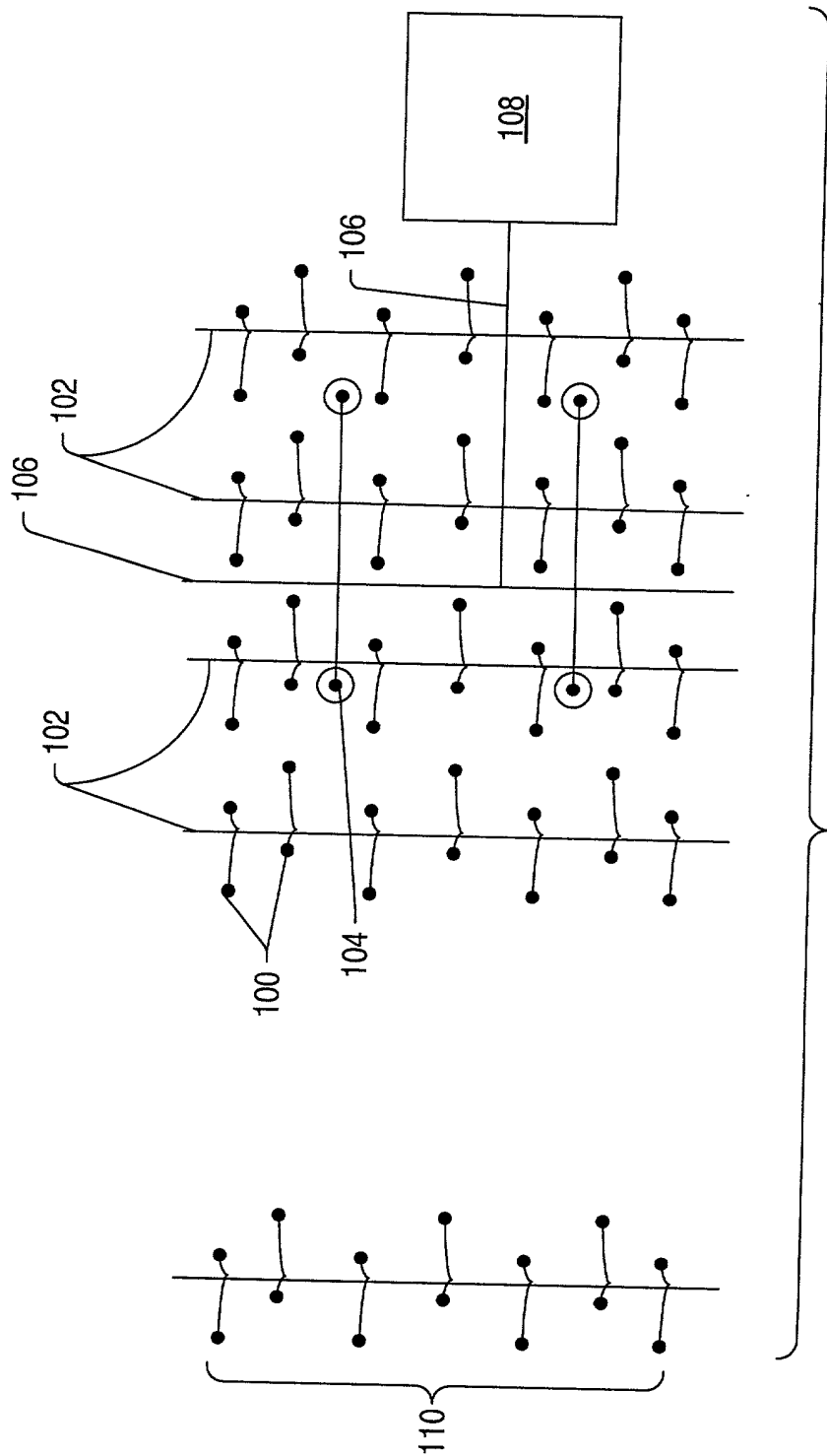


FIG. 3a is a cross-sectional view of a device 200 in a first state. The device 200 includes a substrate 220 and a layer 222. A spring 224 is disposed on the layer 222. The spring 224 is in a compressed state, exerting a downward force on the layer 222. The layer 222 is deformed downwards at the location of the spring 224.

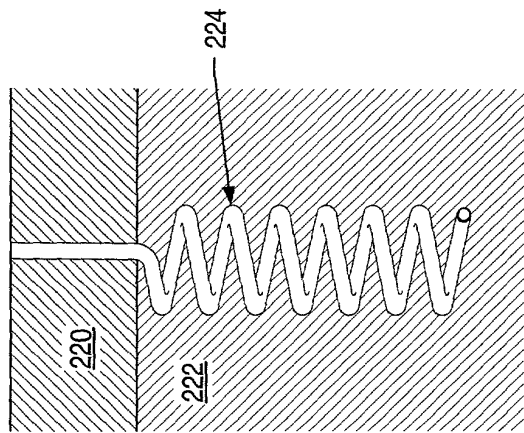


FIG. 3a

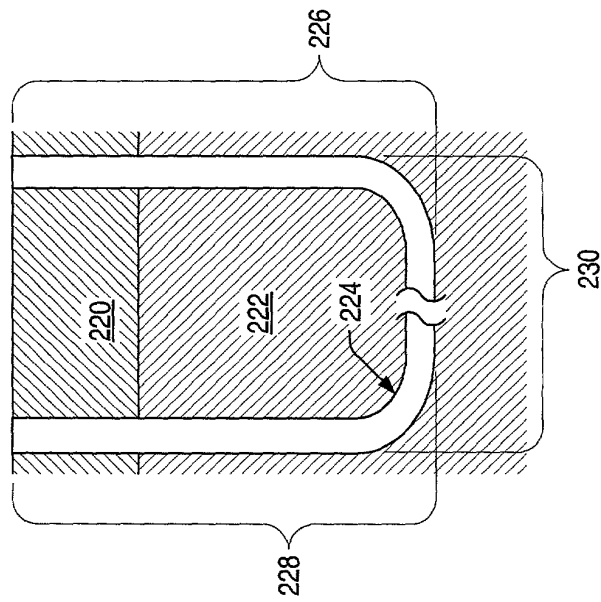


FIG. 3b

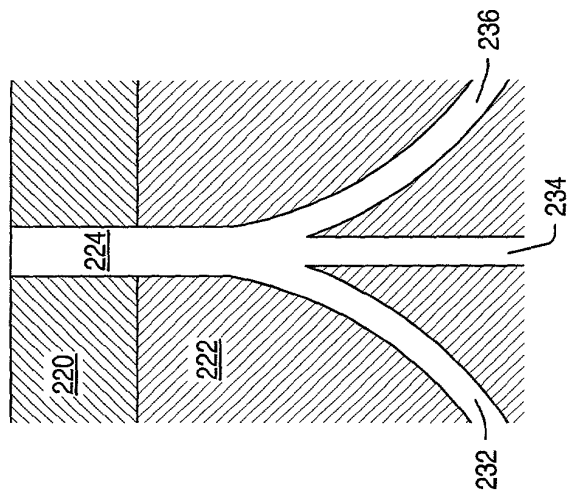


FIG. 3c

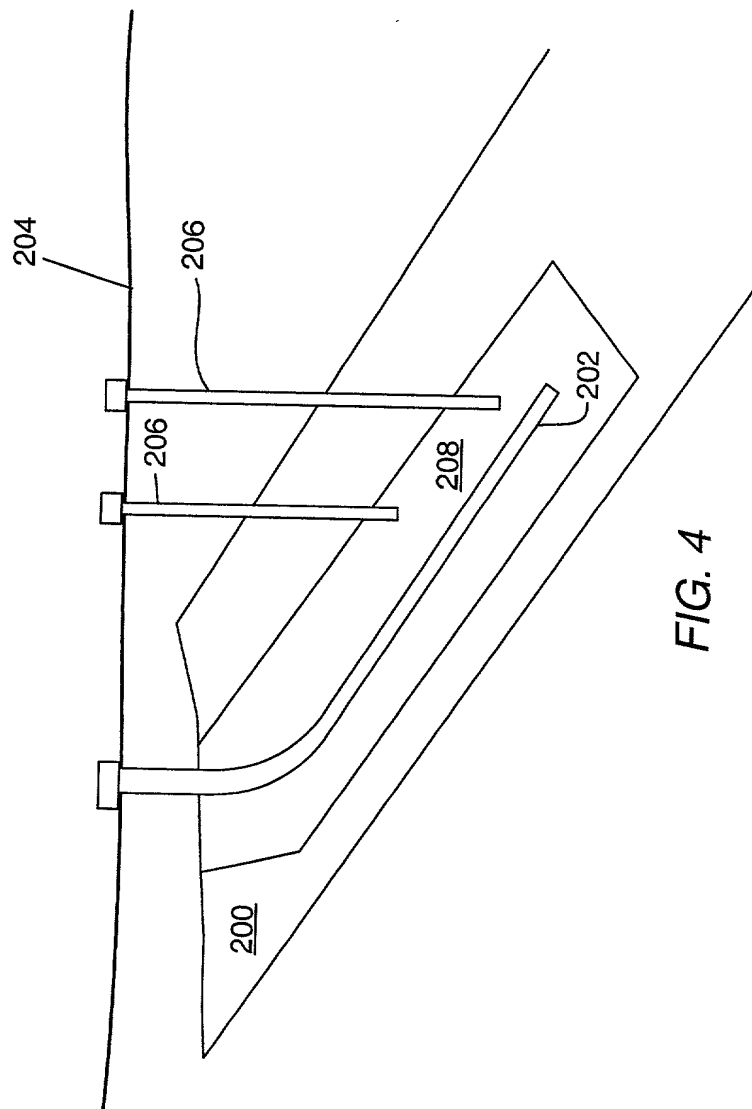
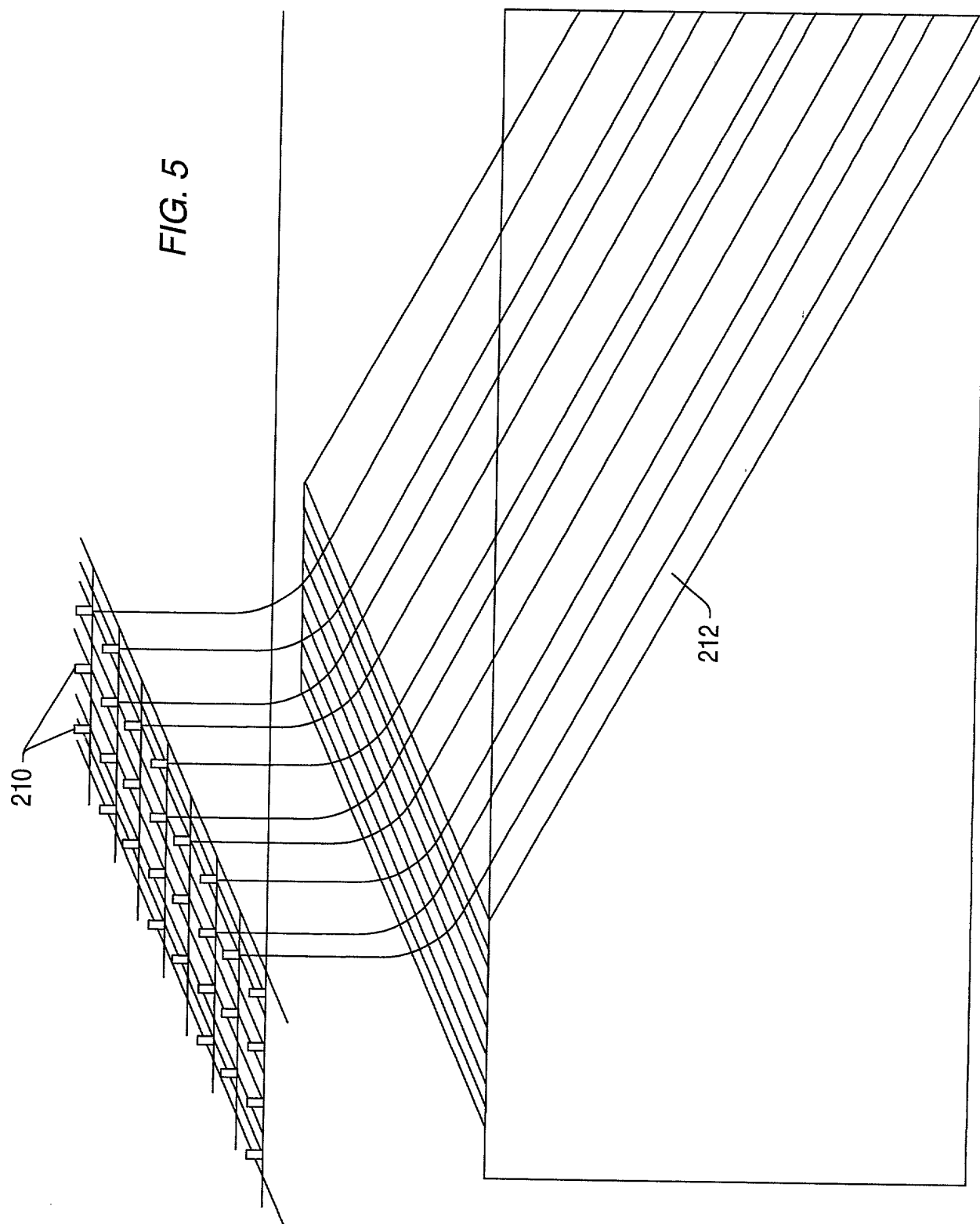


FIG. 4



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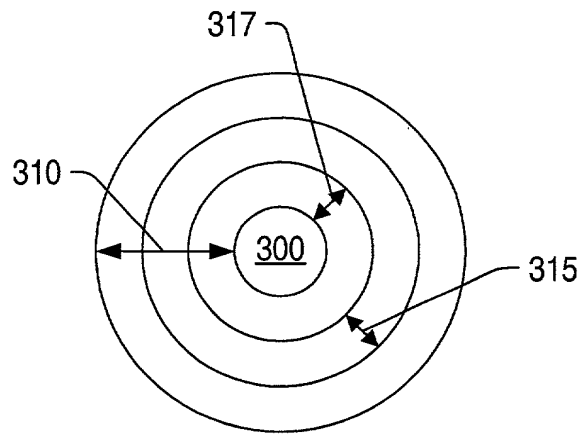


FIG. 6

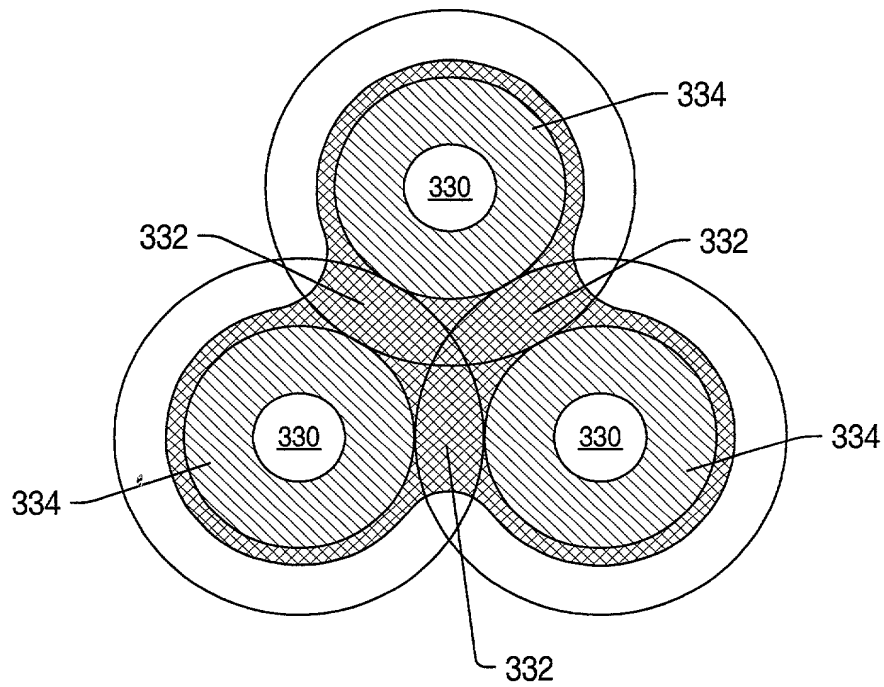


FIG. 7

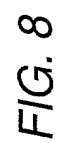


FIG. 8

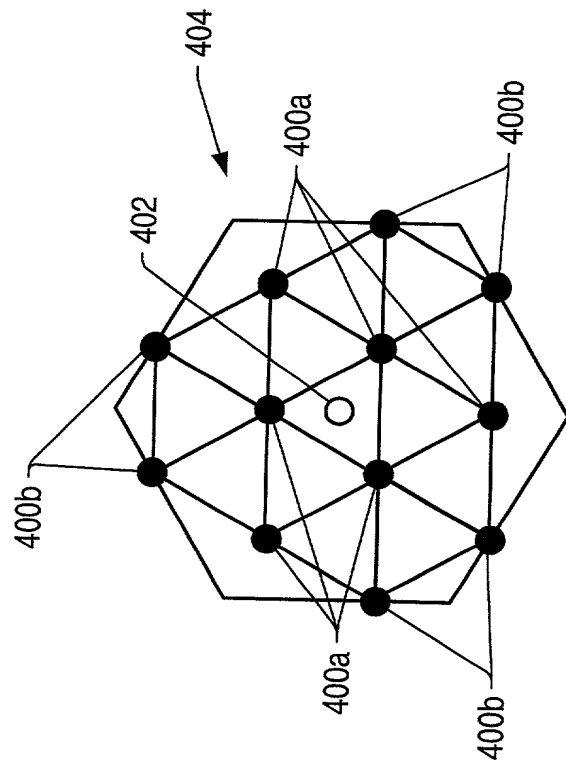


FIG. 9

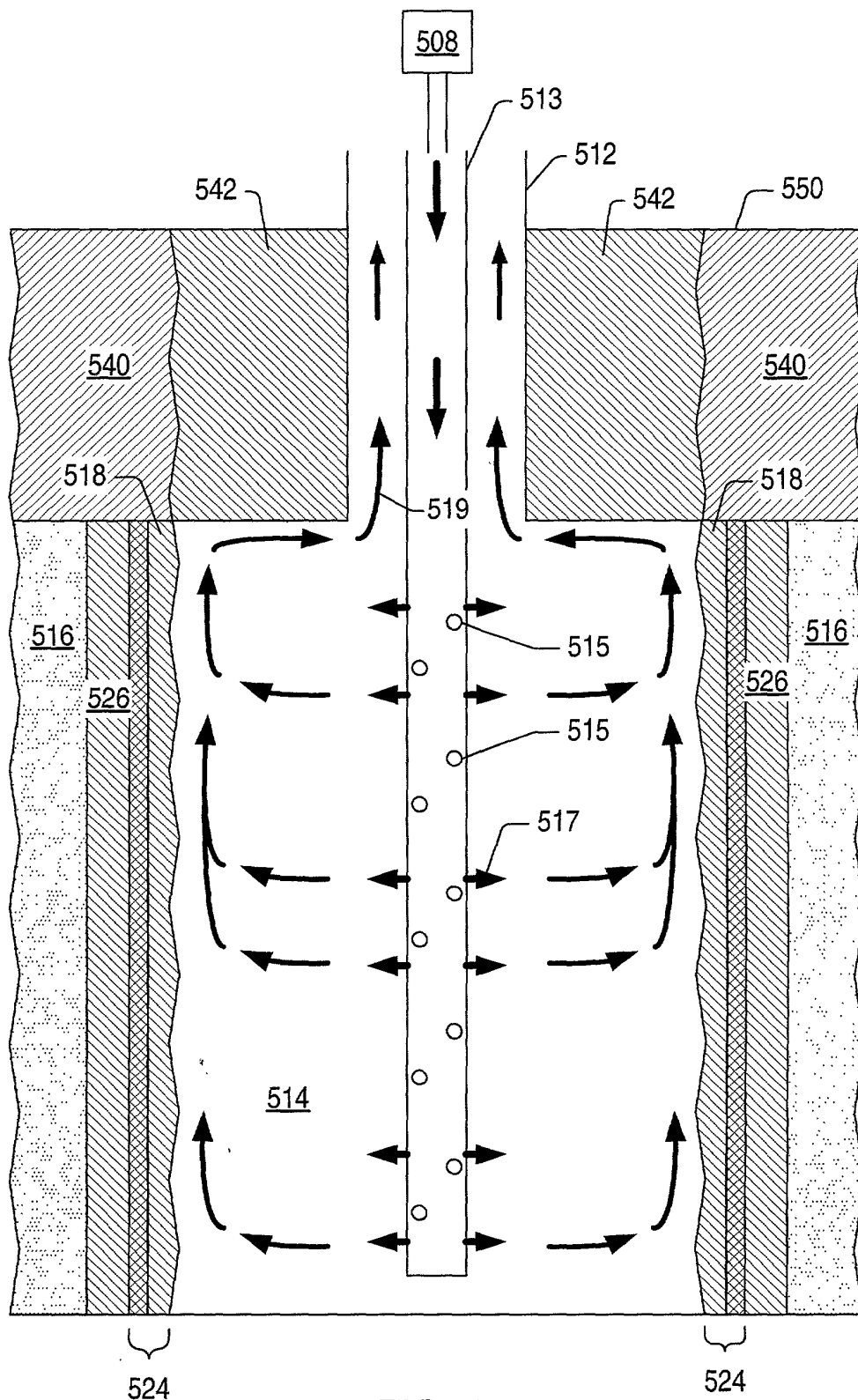


FIG. 10

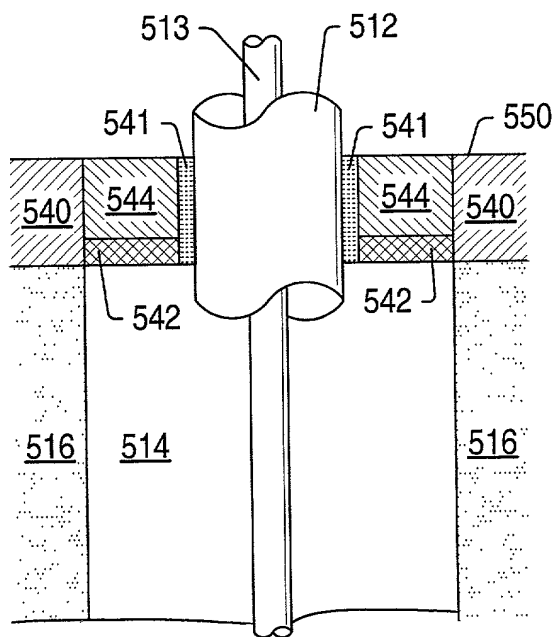


FIG. 11

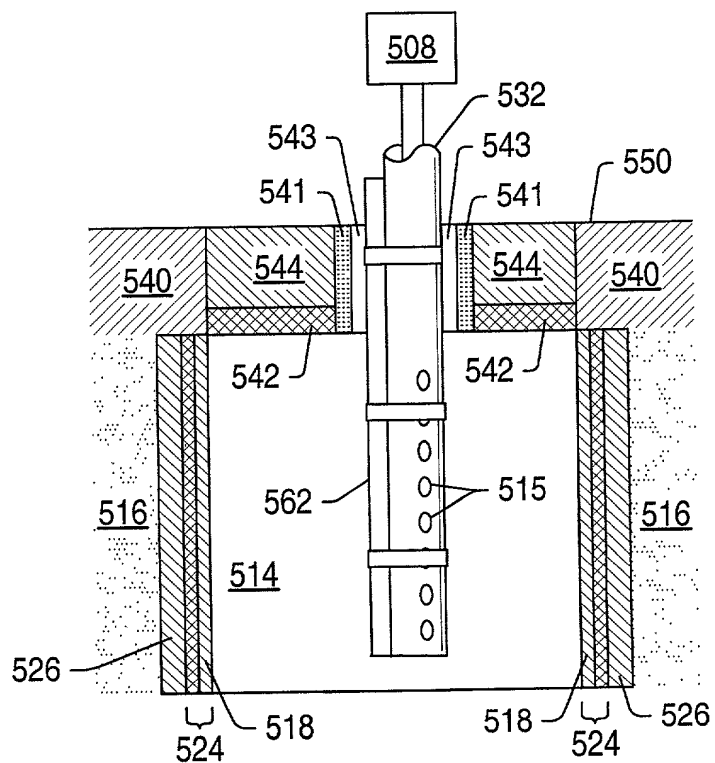


FIG. 12

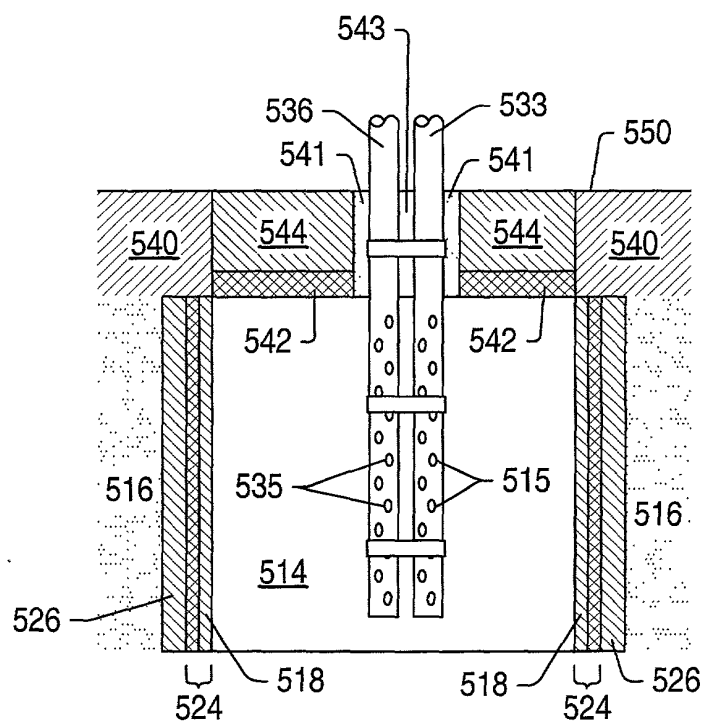


Fig. 13

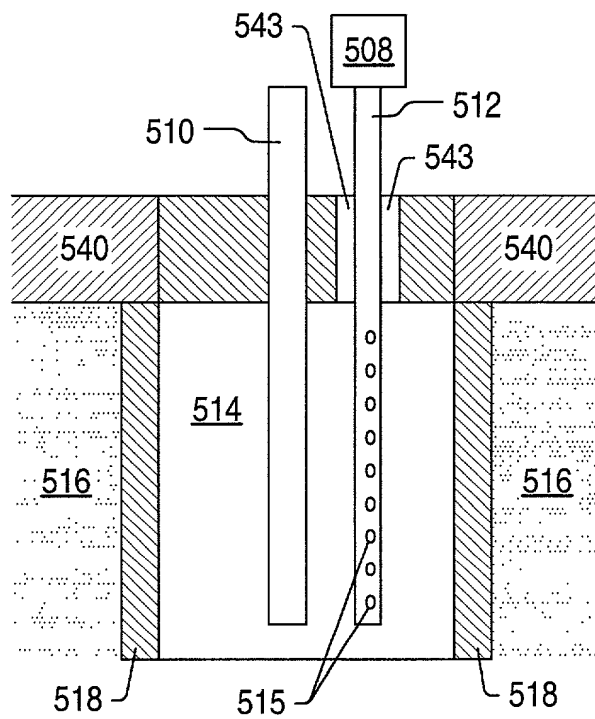


FIG. 14

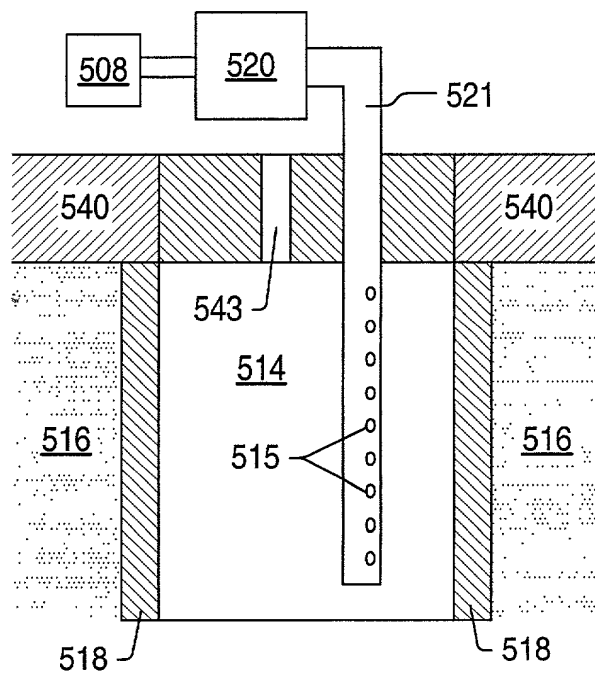


FIG. 15

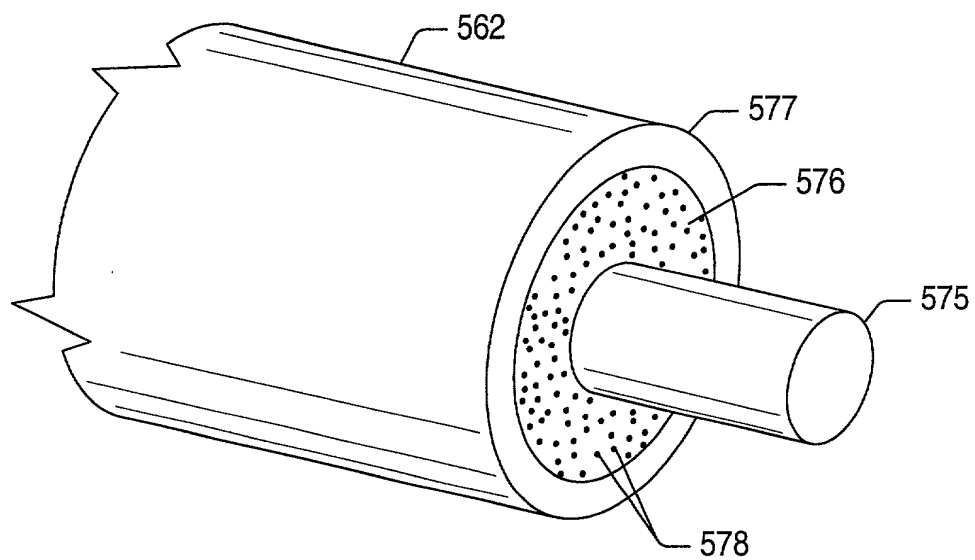


FIG. 16

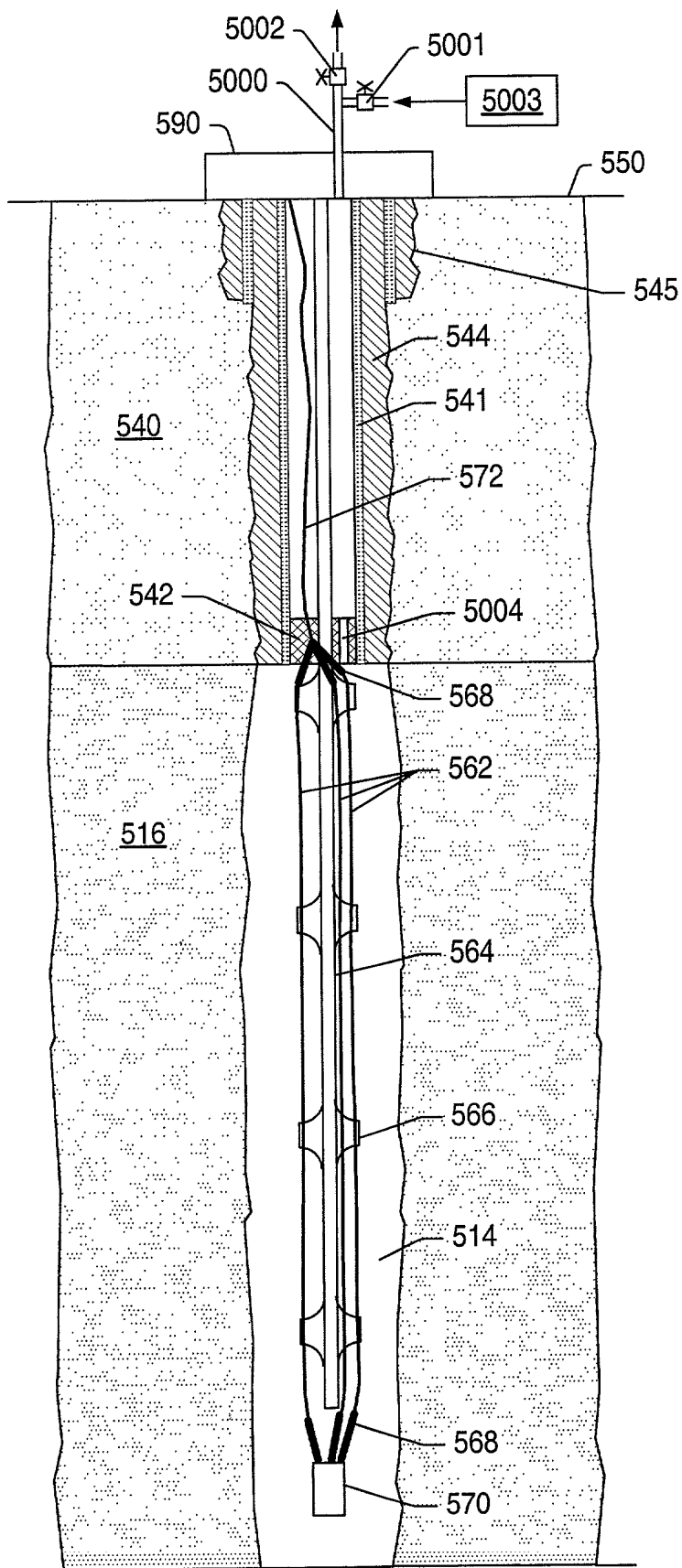


FIG. 17

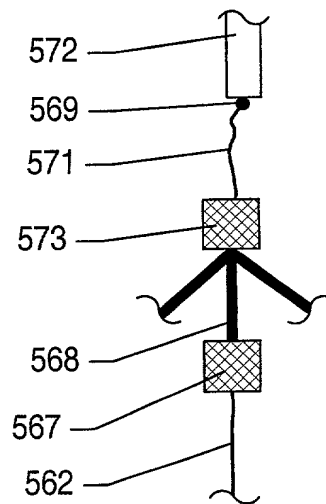


FIG. 17A

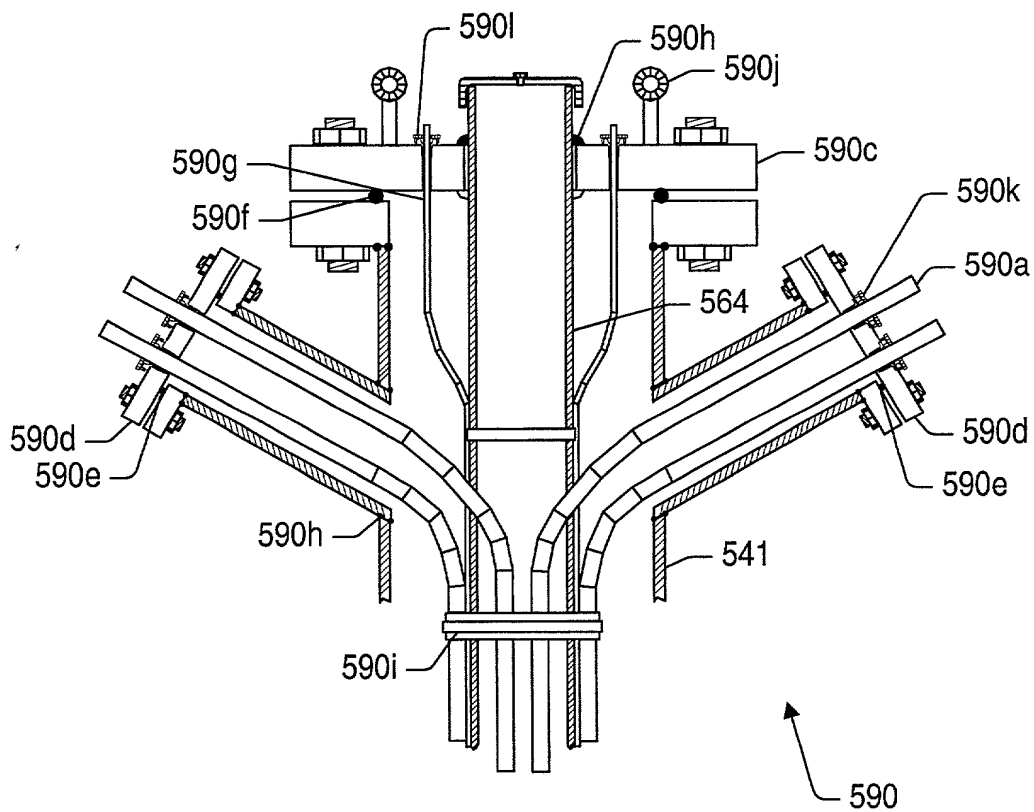


FIG. 18

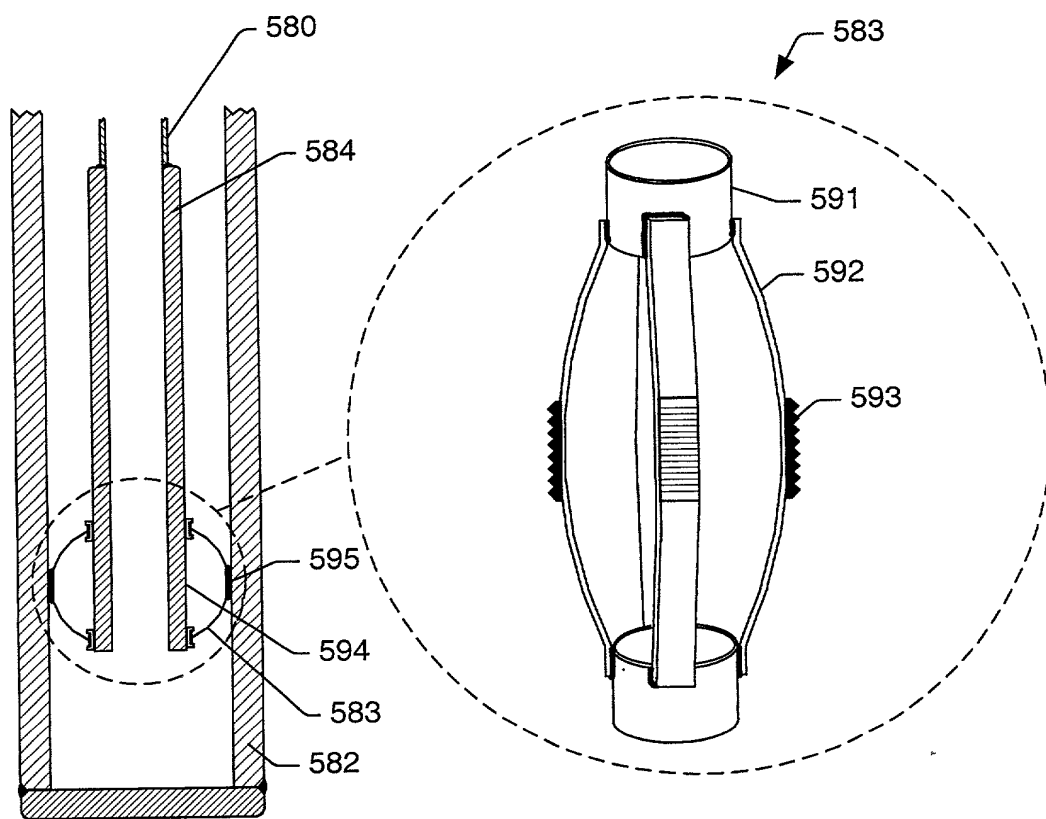


FIG. 20

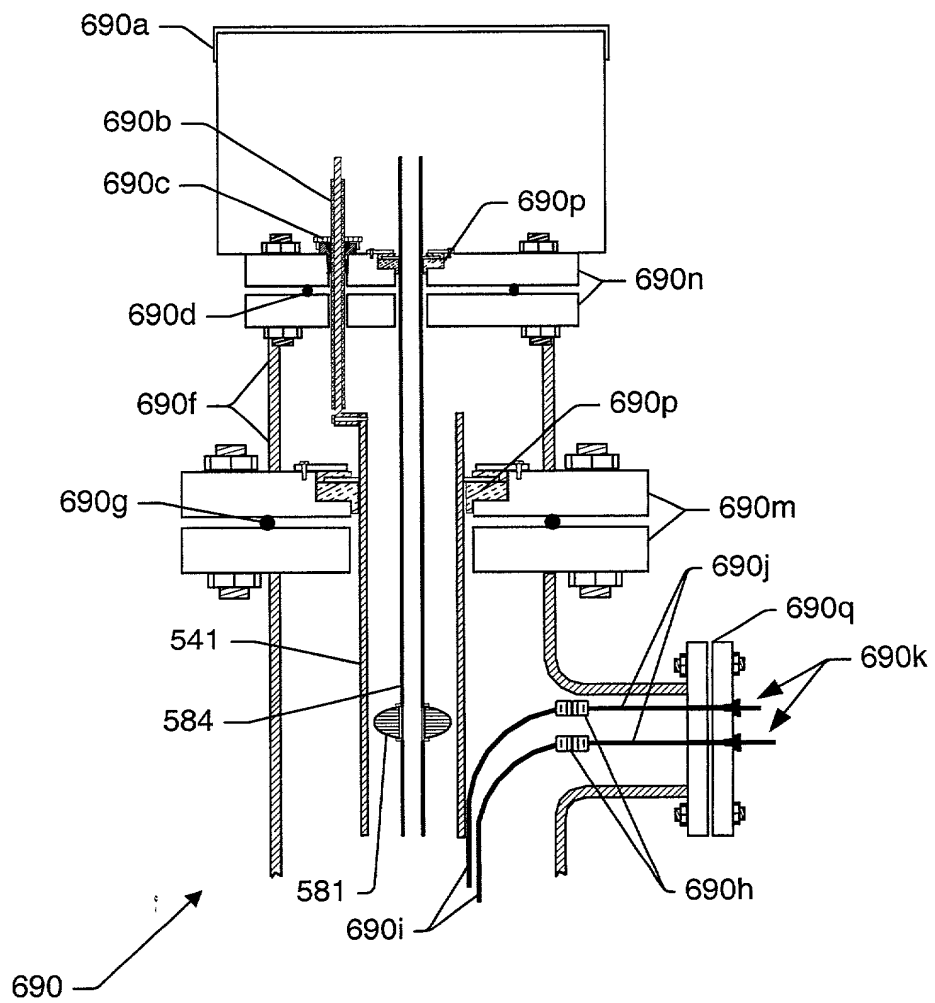


FIG. 21

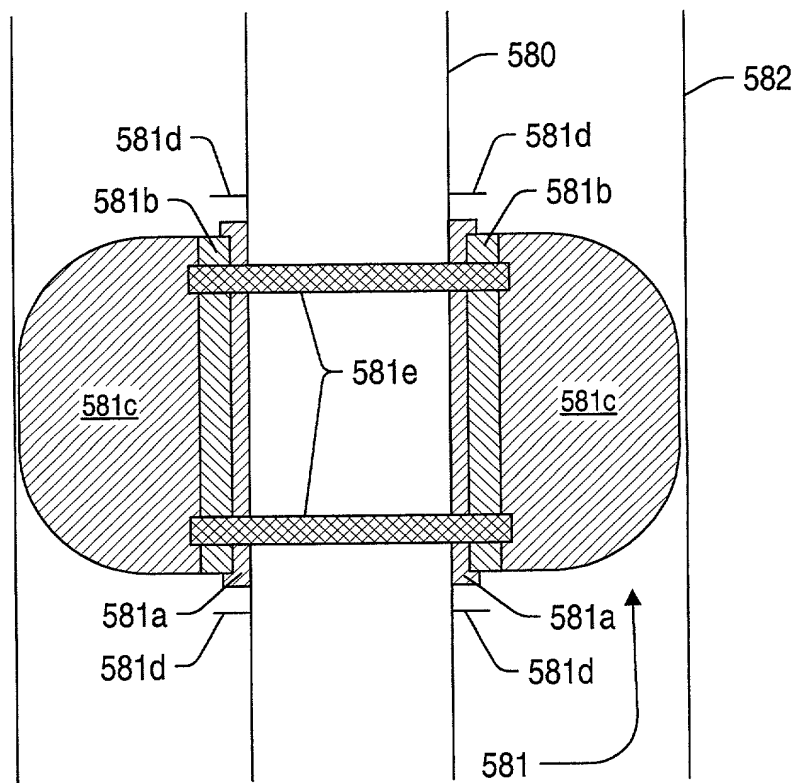


FIG. 22

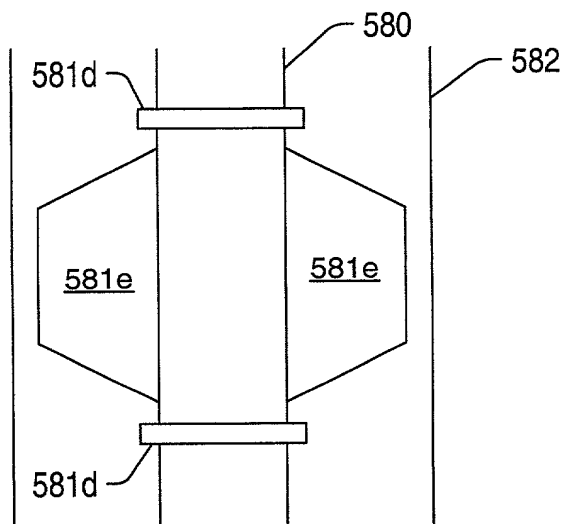


FIG. 23a

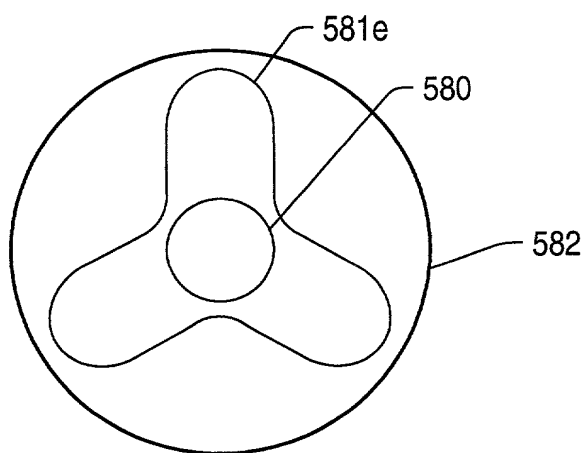


FIG. 23b

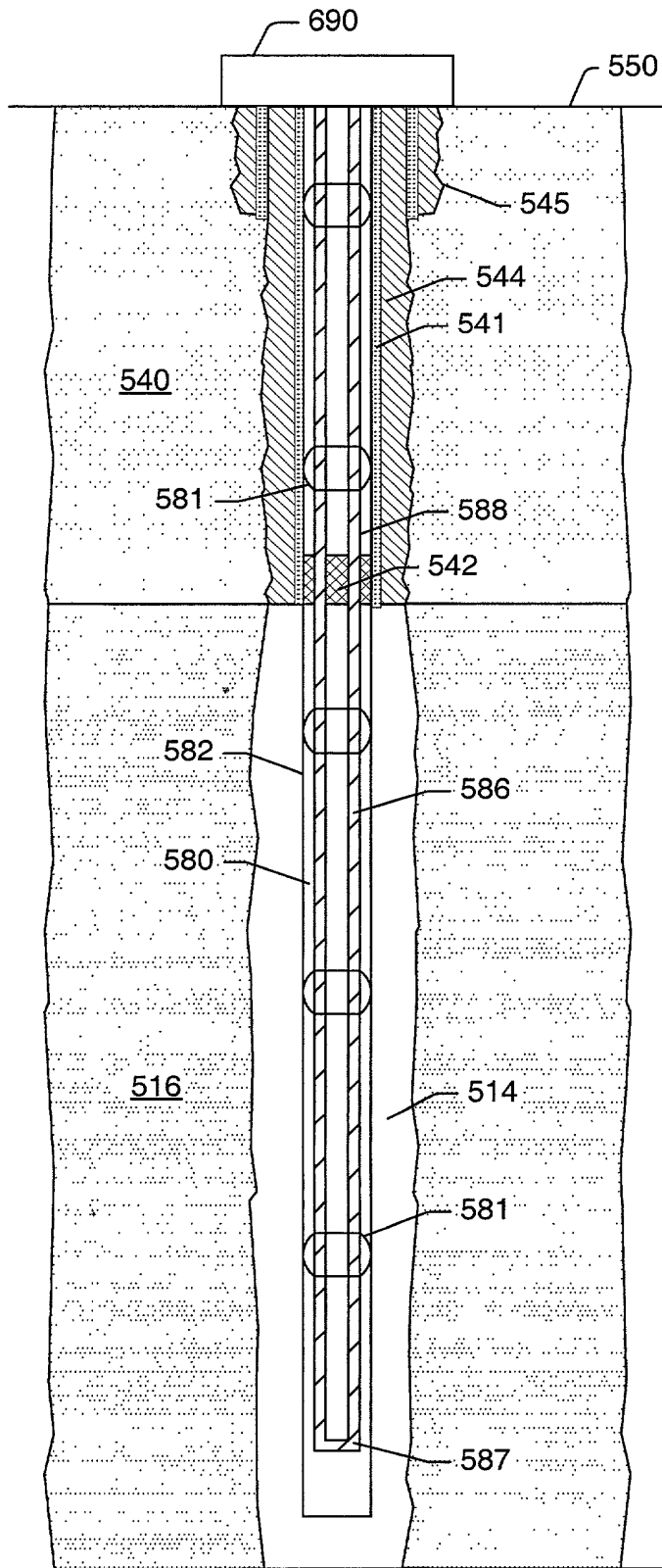


Fig. 24

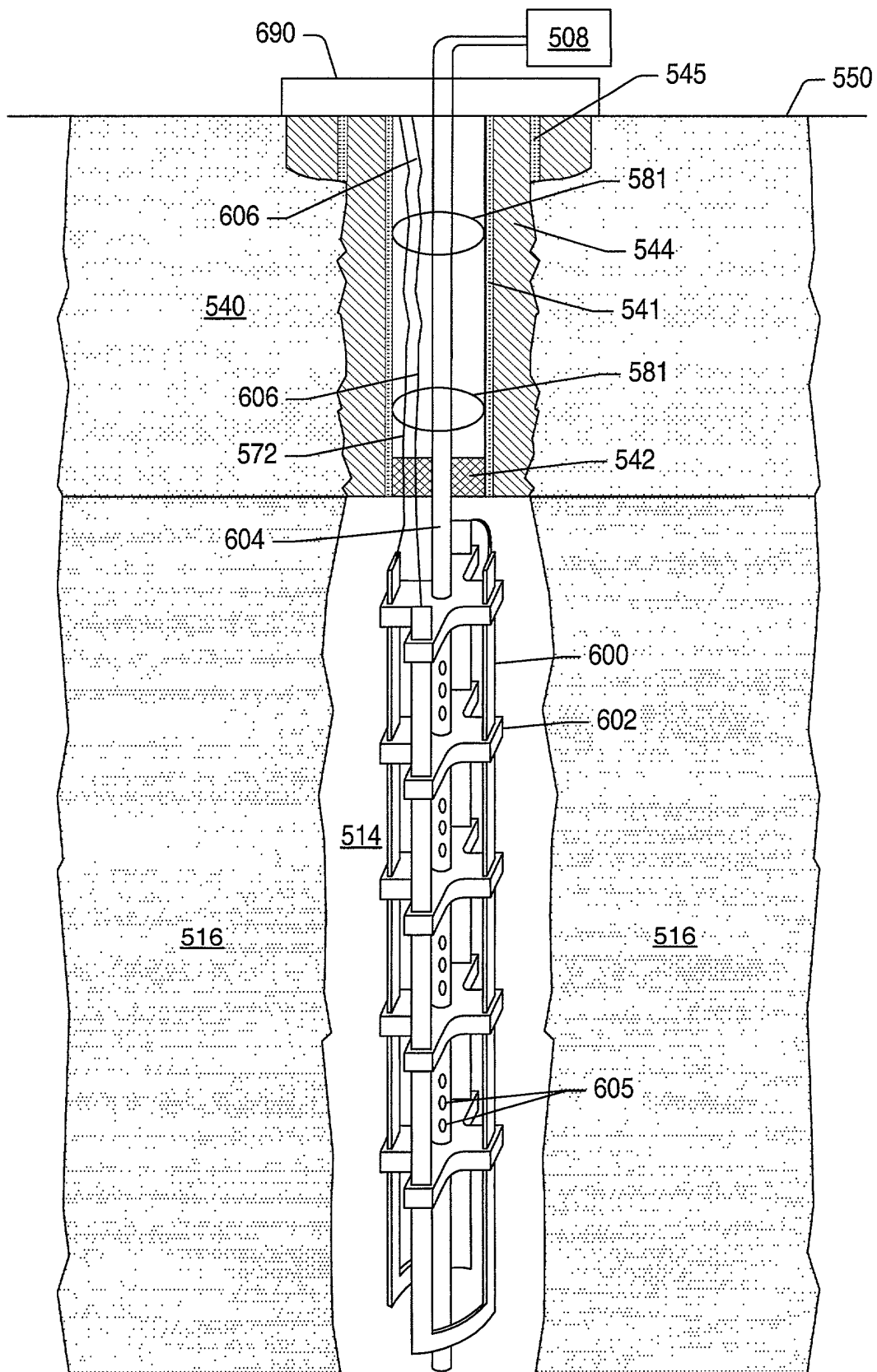


FIG. 25

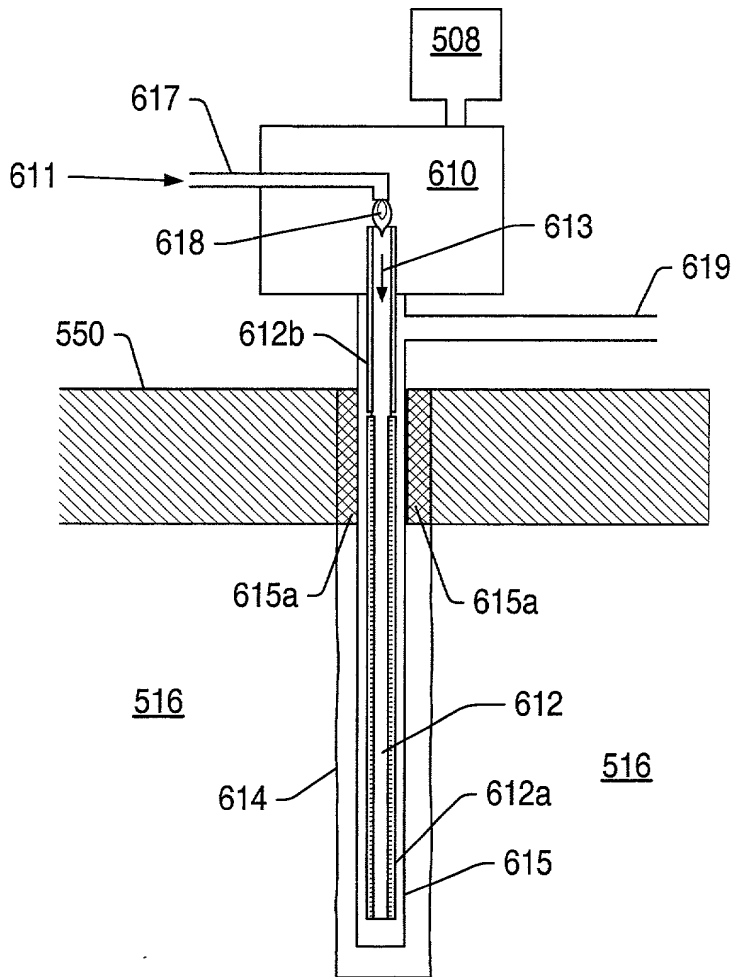


FIG. 26

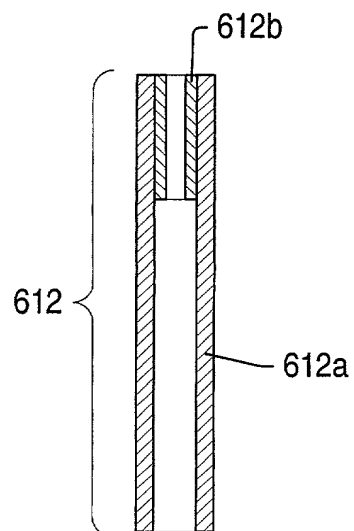


FIG. 27

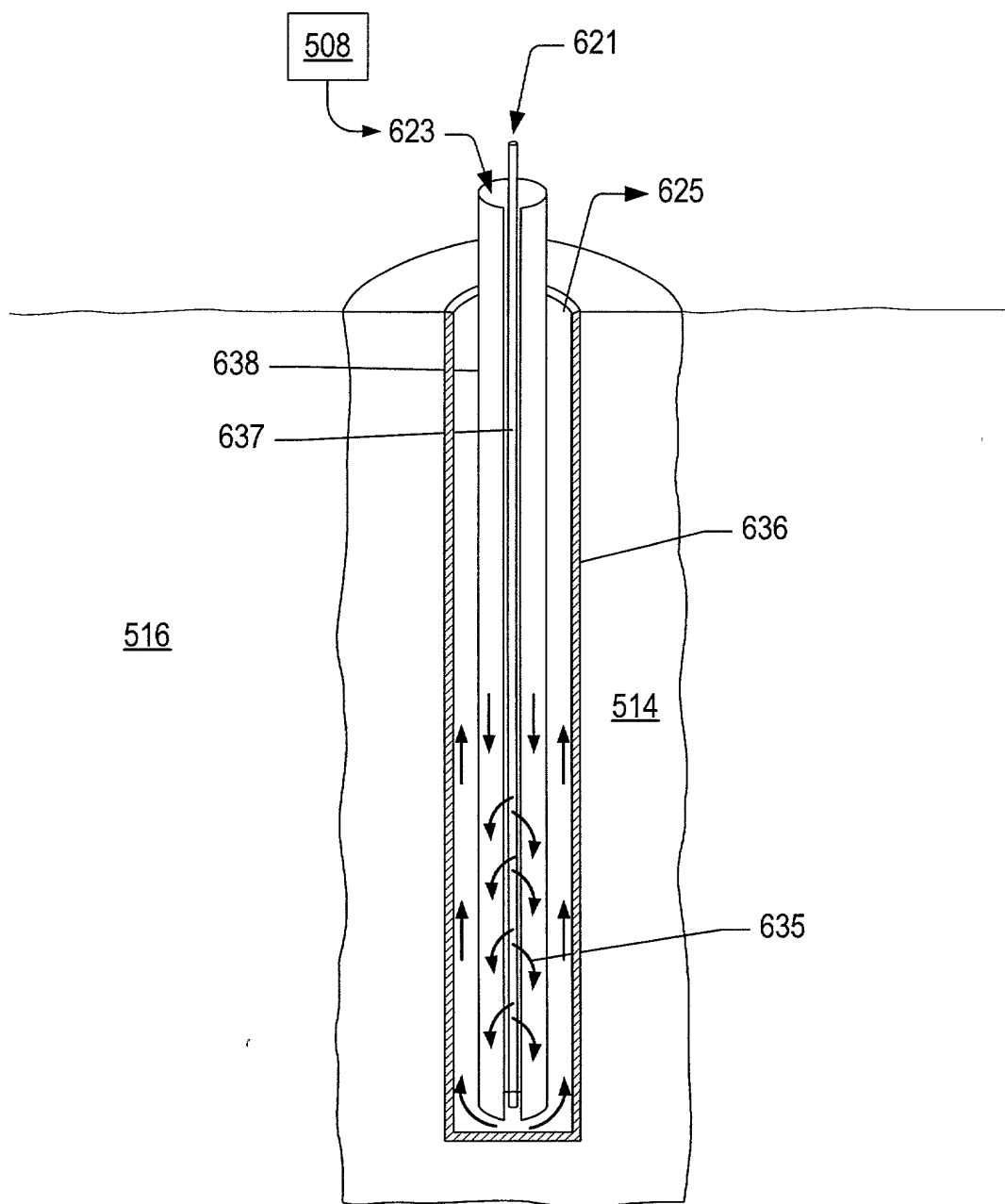


FIG. 28

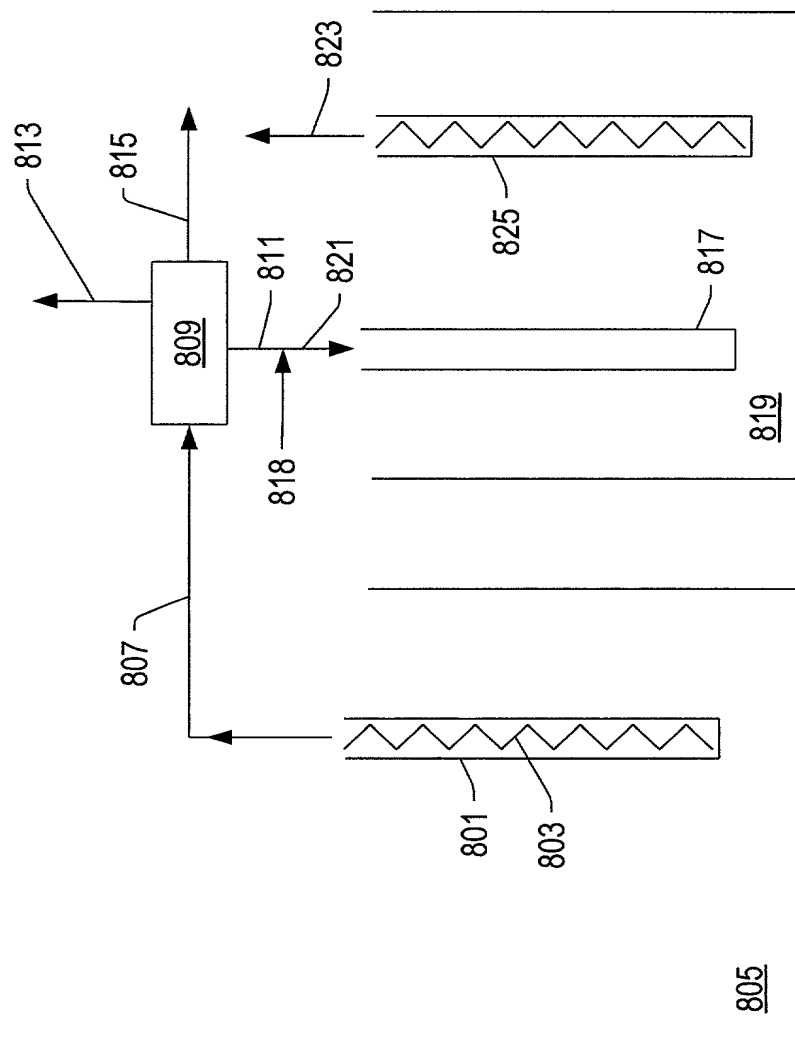


FIG. 29

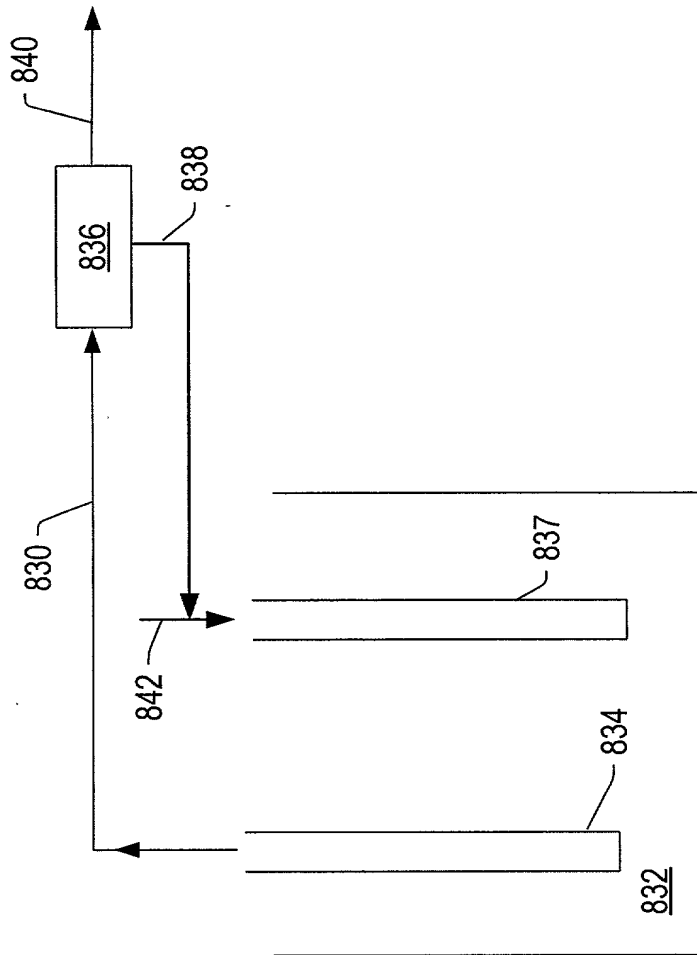


FIG. 30

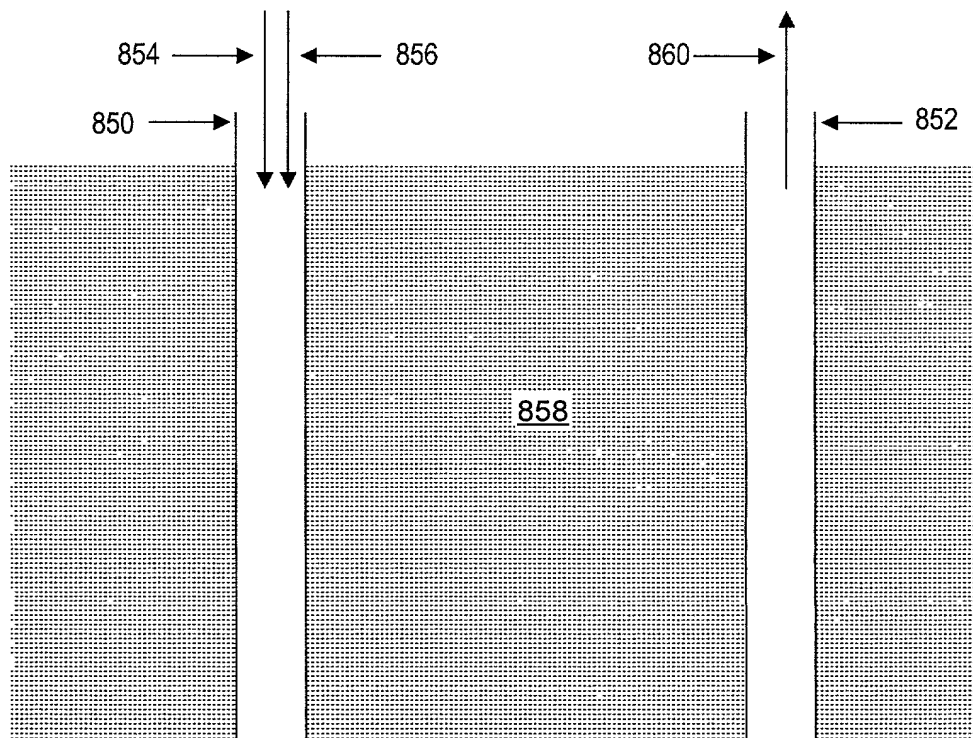


FIG. 31

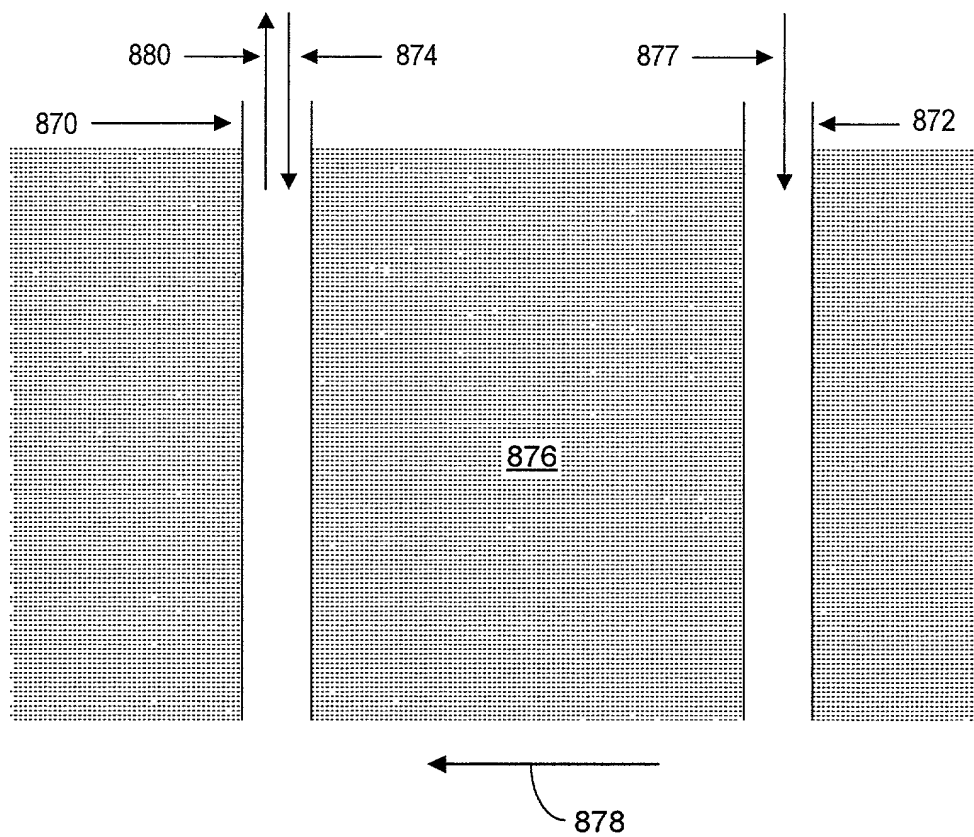


FIG. 32

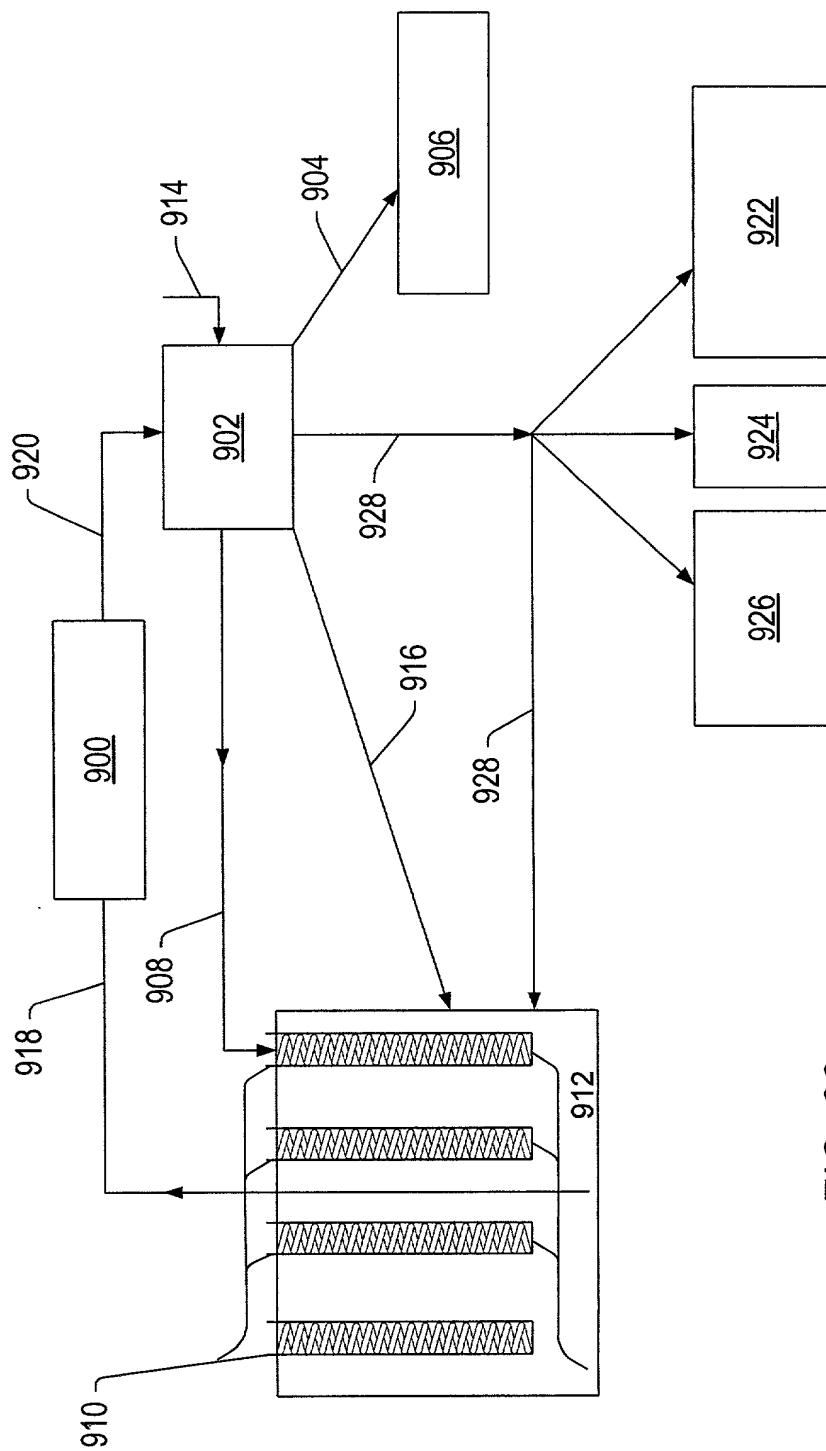


FIG. 33

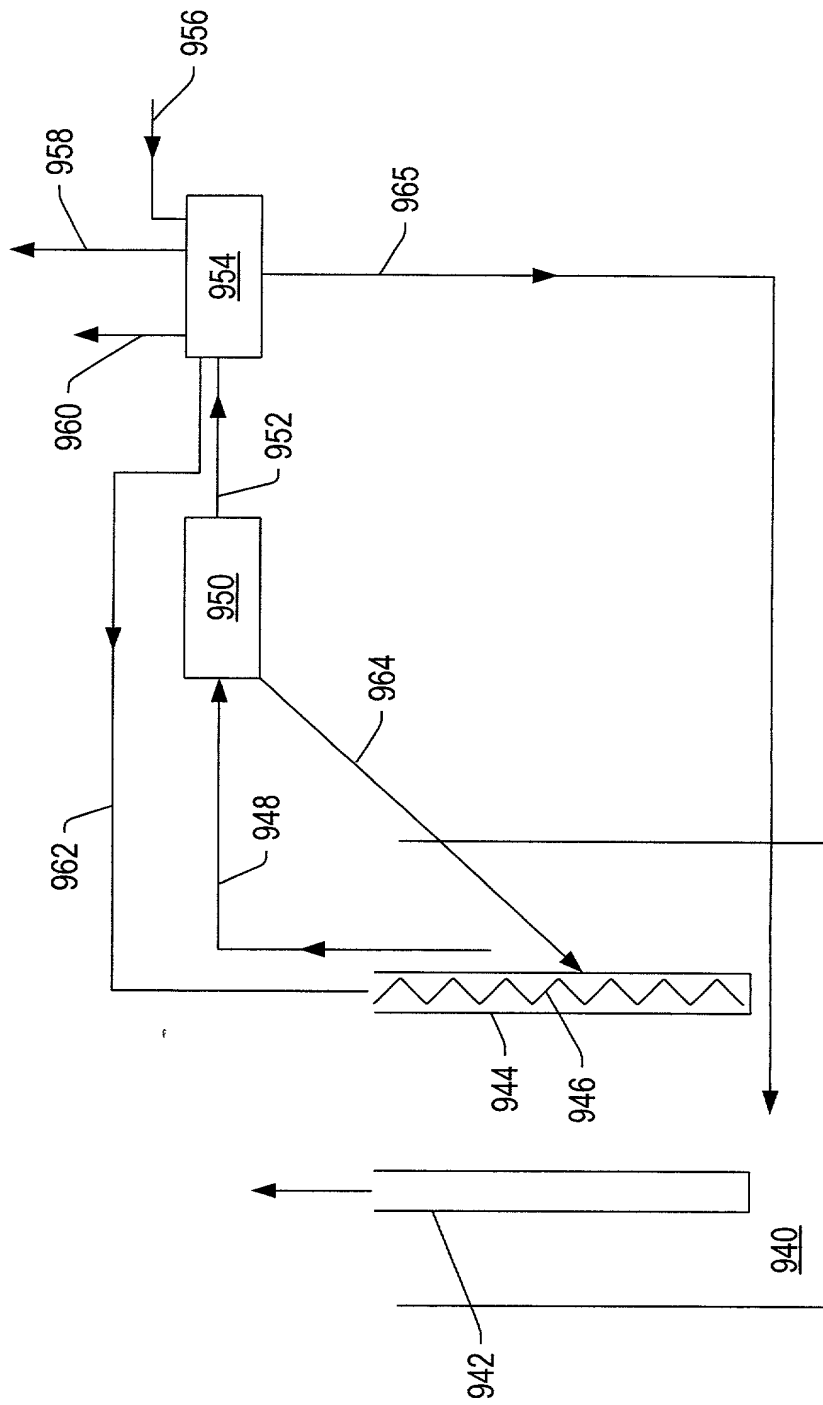


FIG. 34

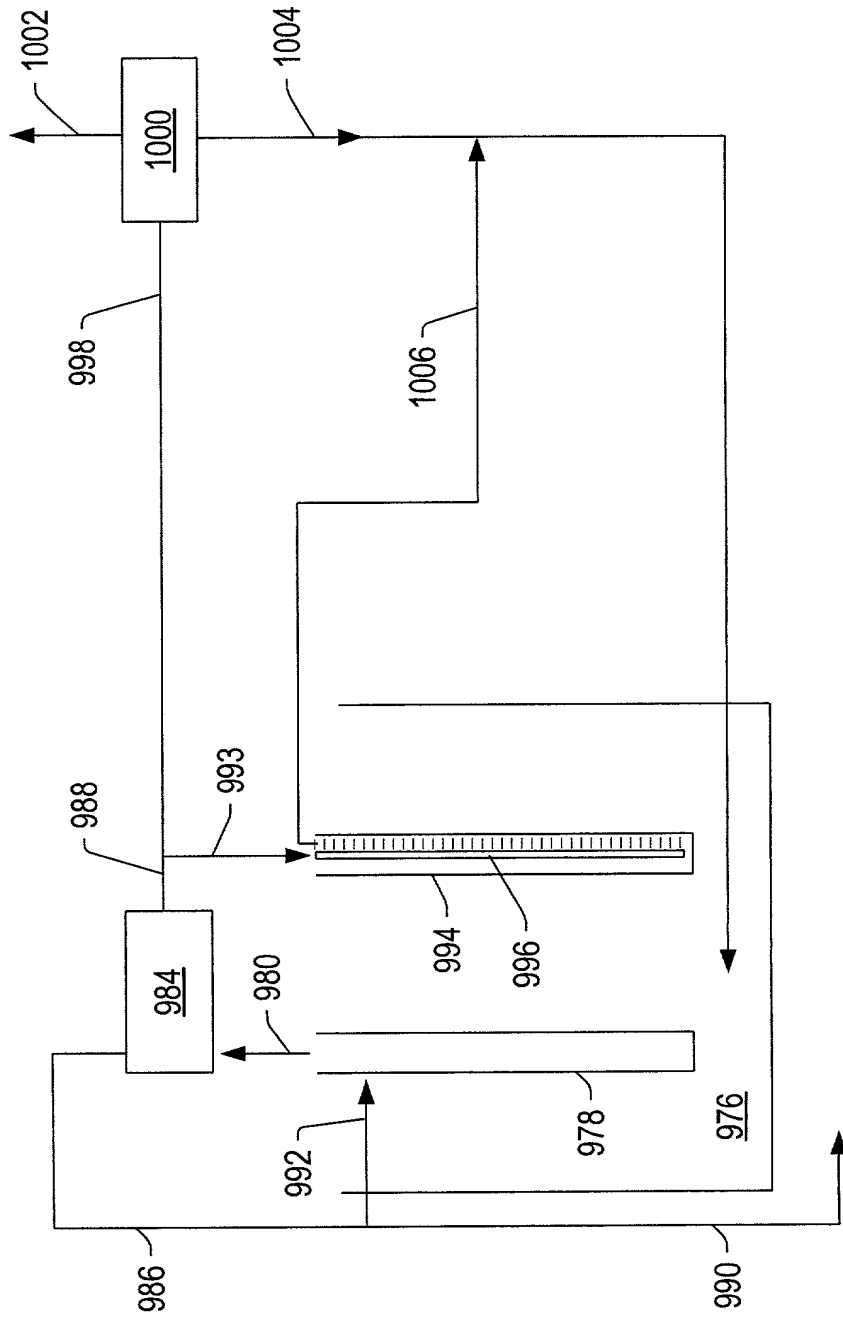


FIG. 35

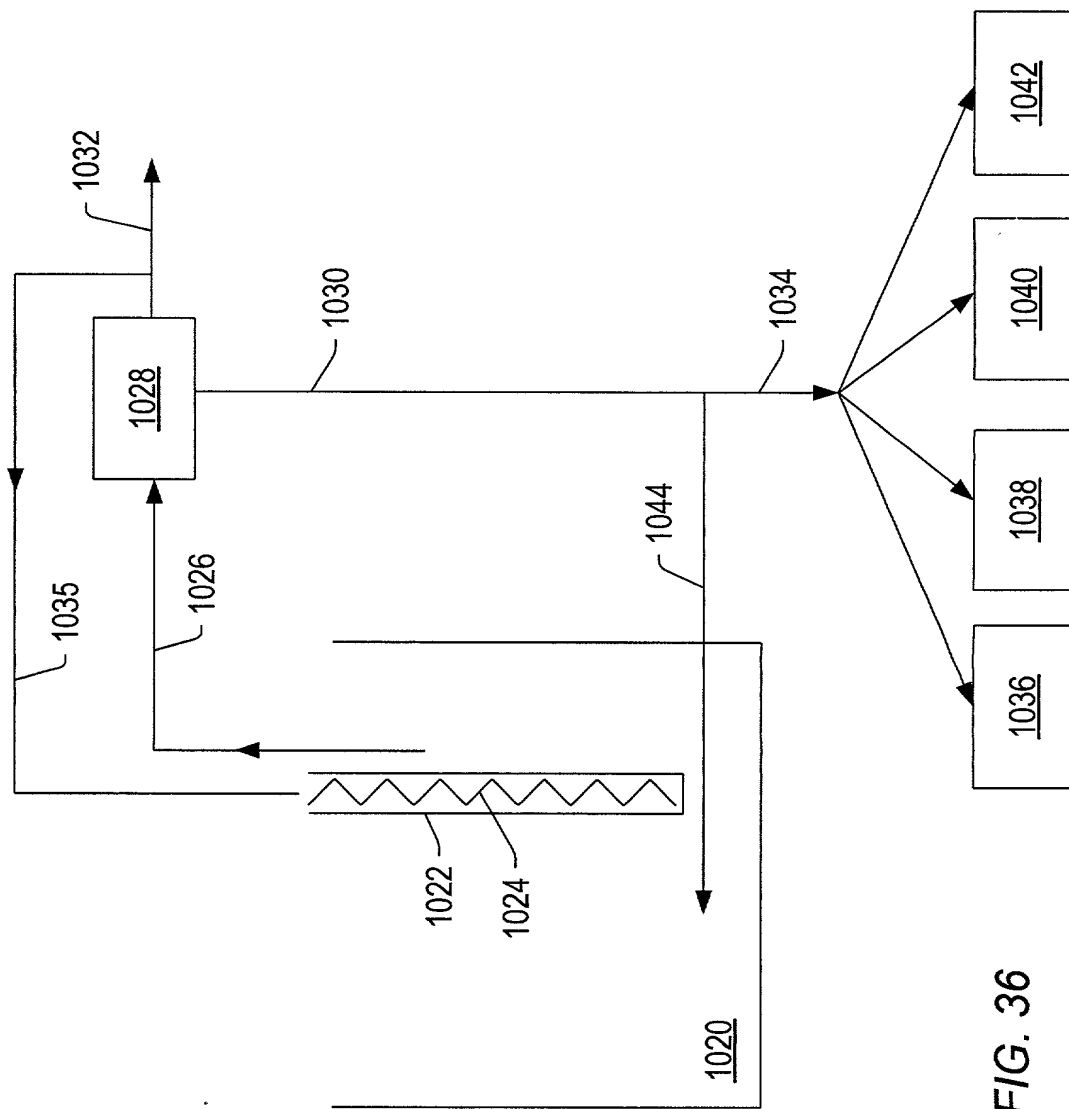


FIG. 36

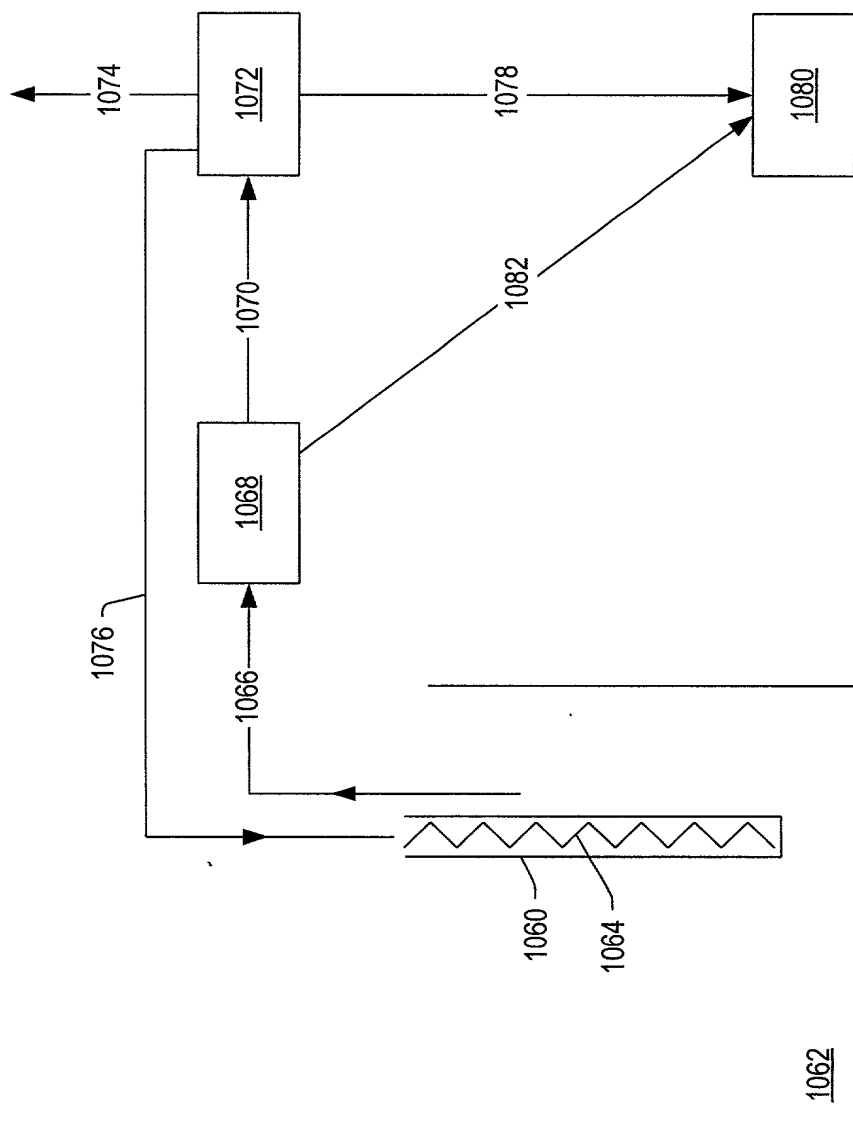


FIG. 37

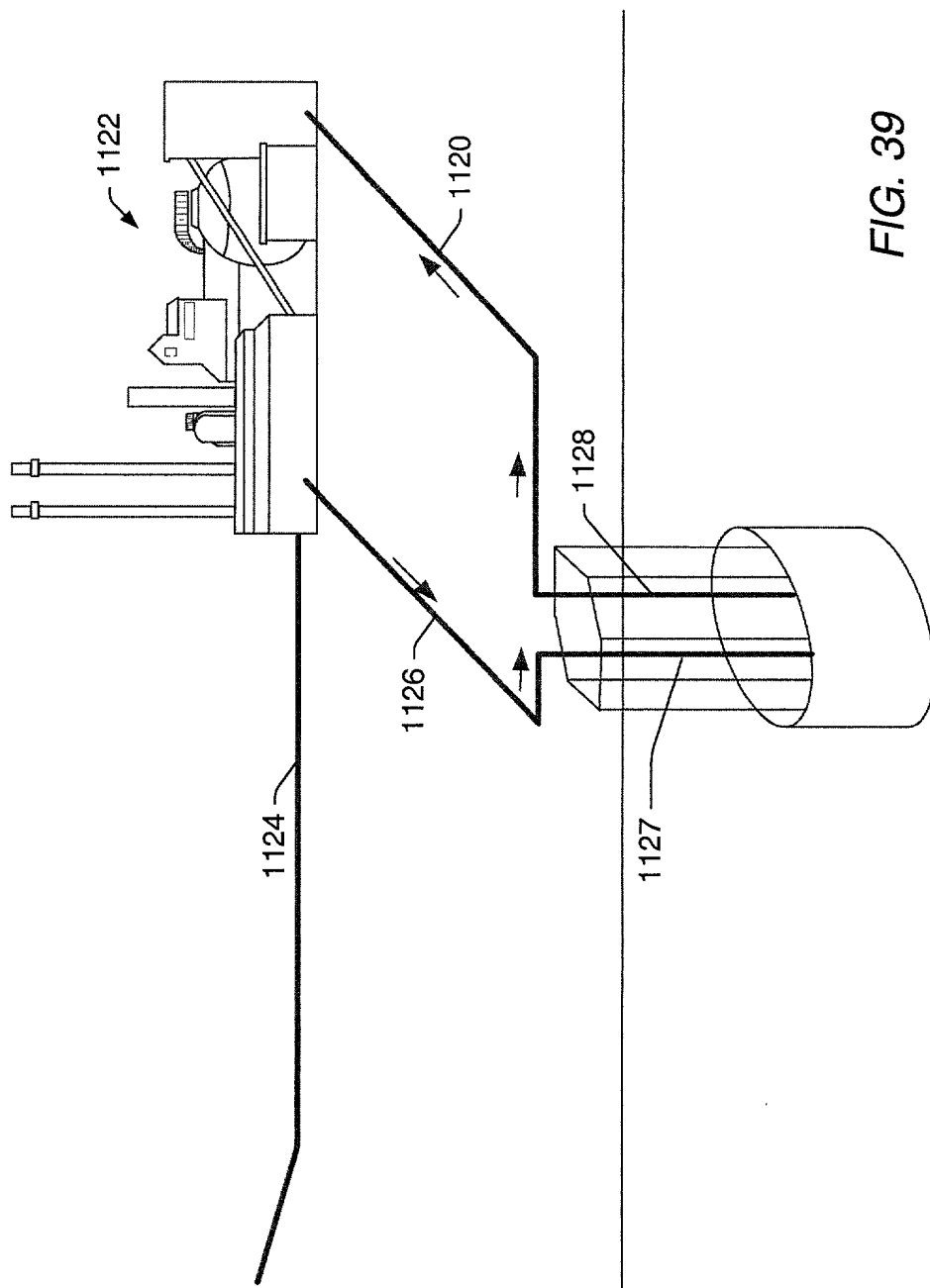


FIG. 39

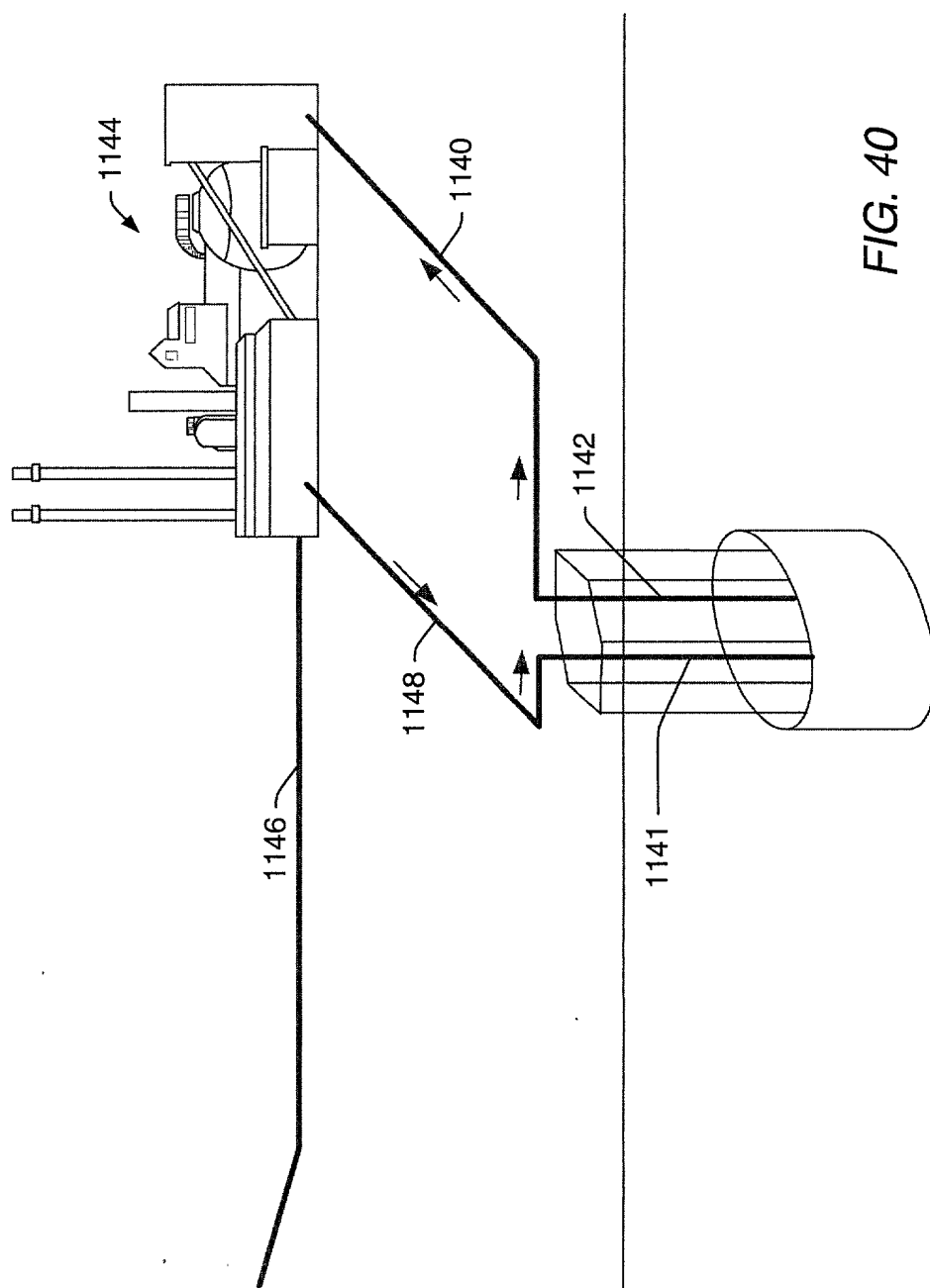


FIG. 40

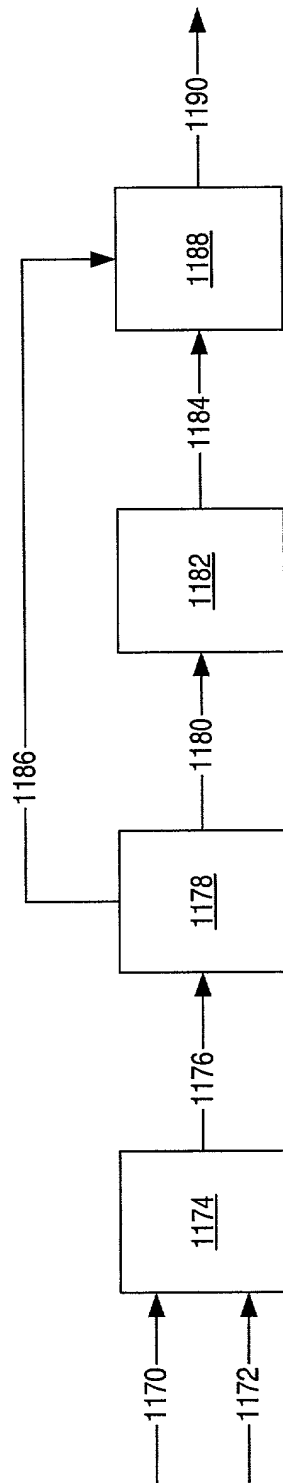


FIG. 41

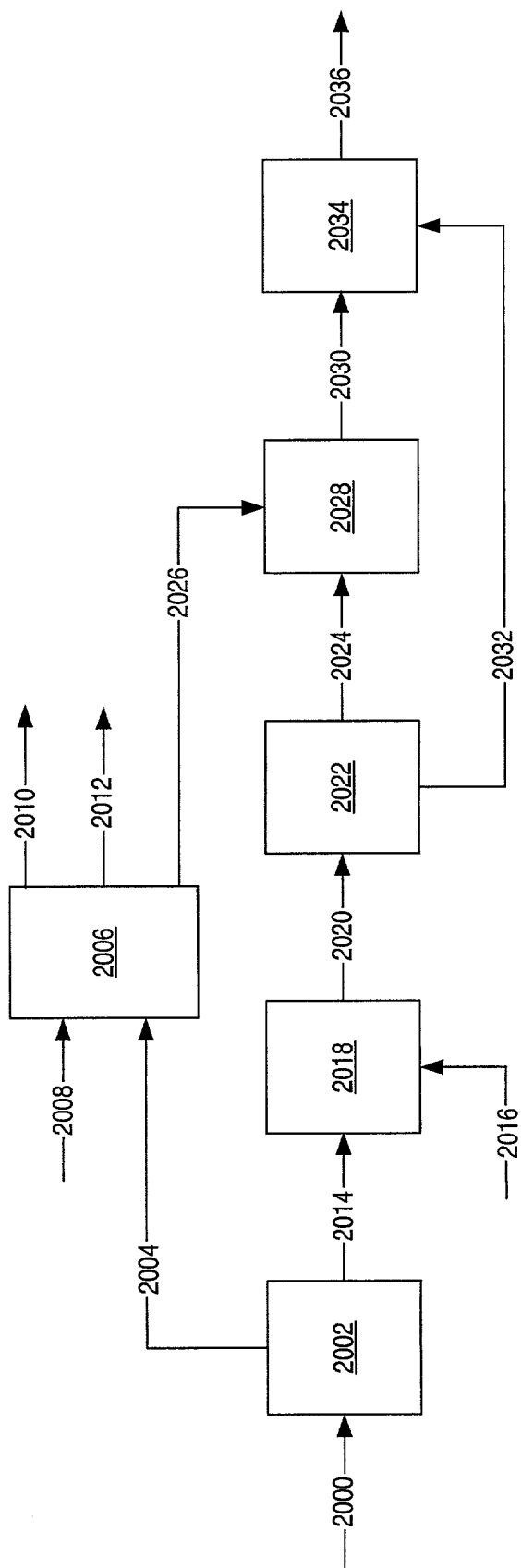


FIG. 42

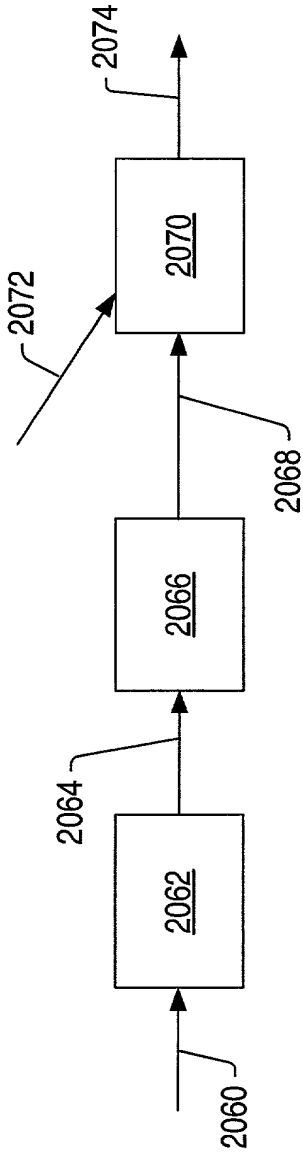


FIG. 43

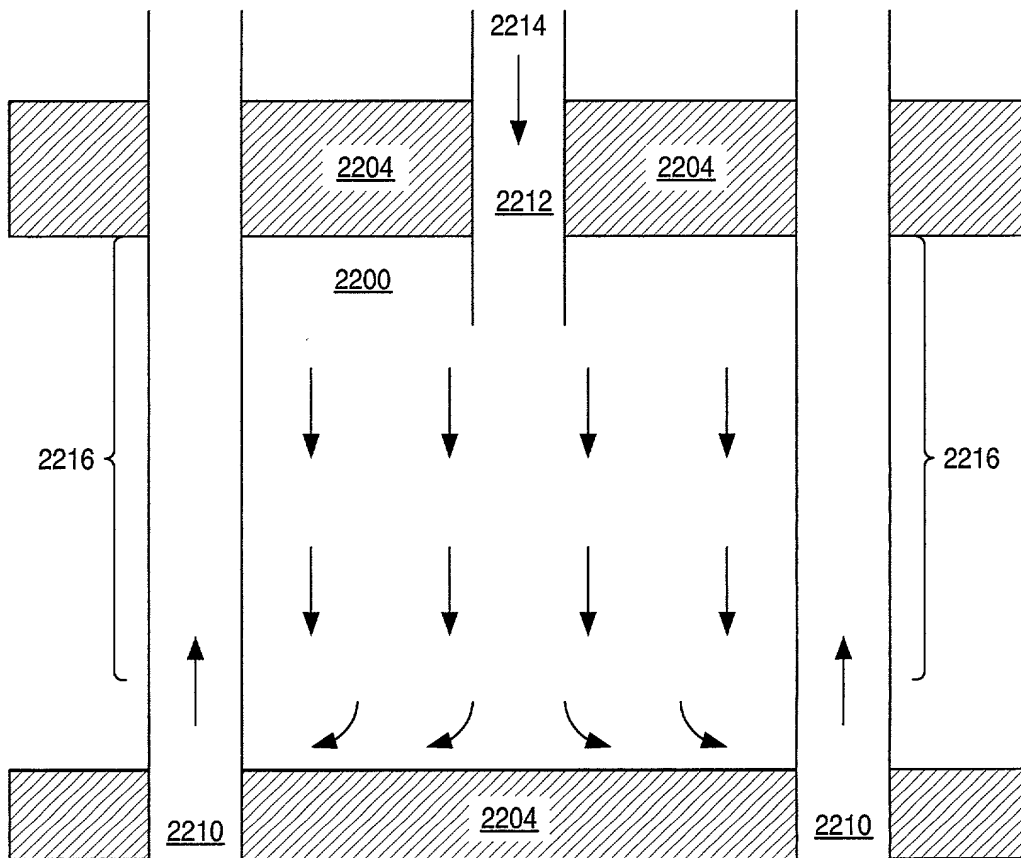


FIG. 45

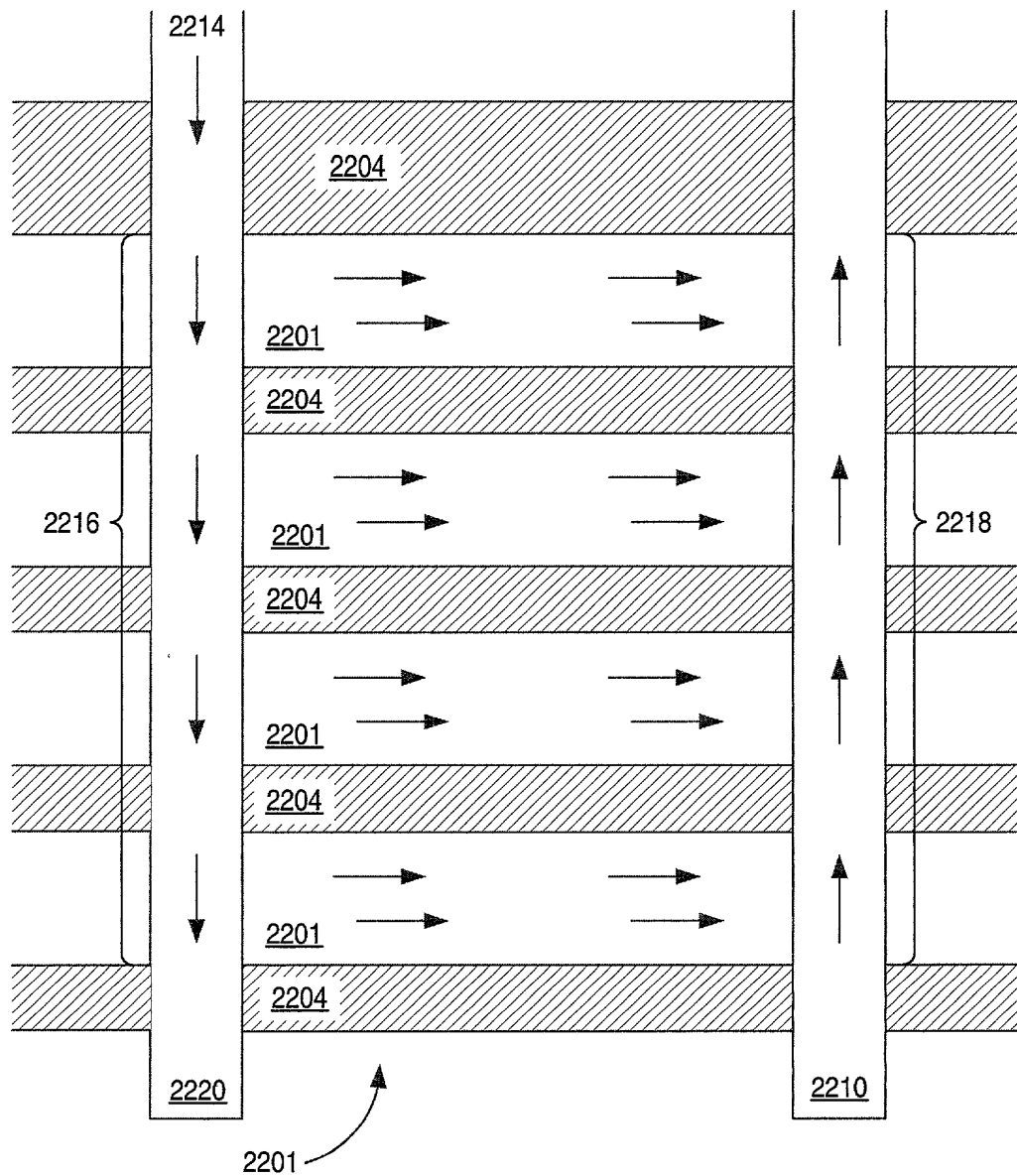


FIG. 46

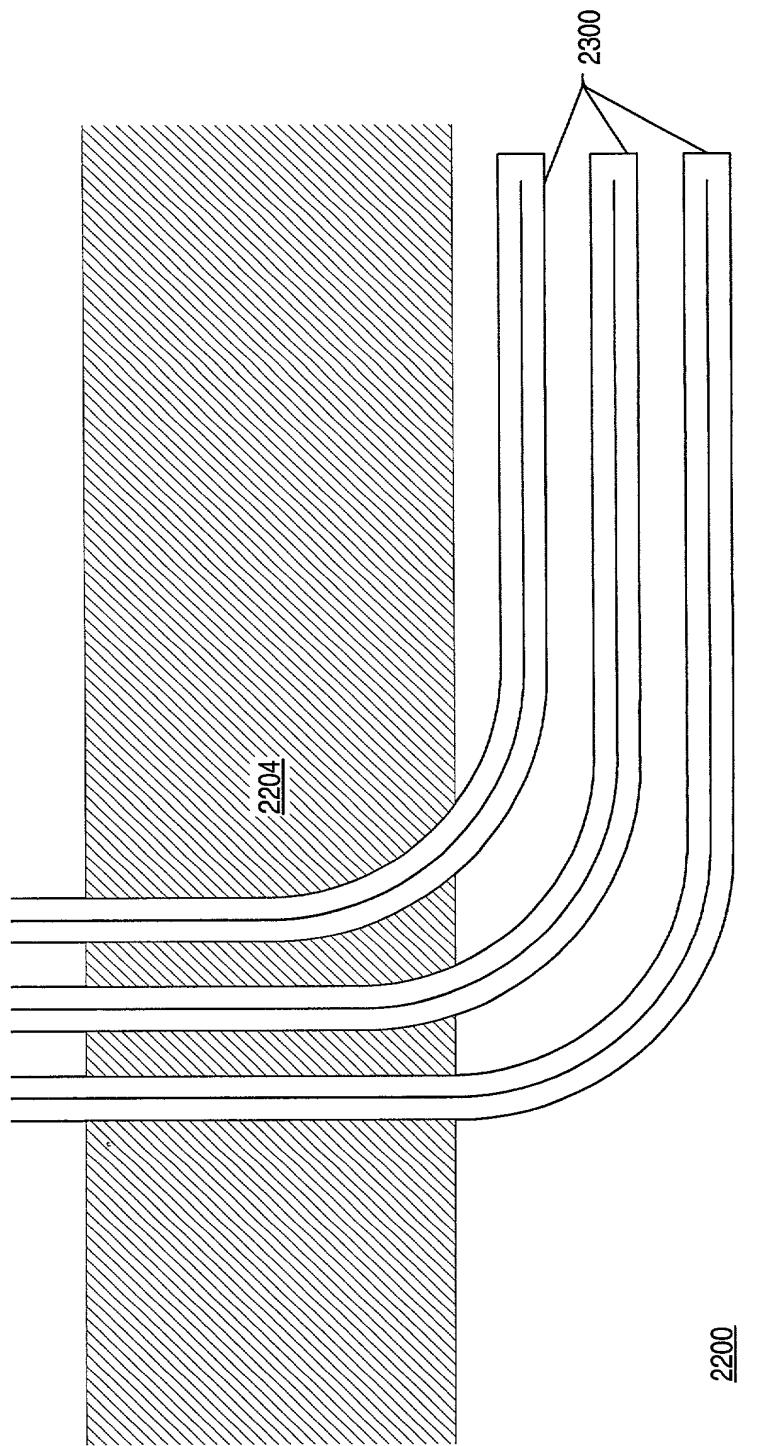


FIG. 47

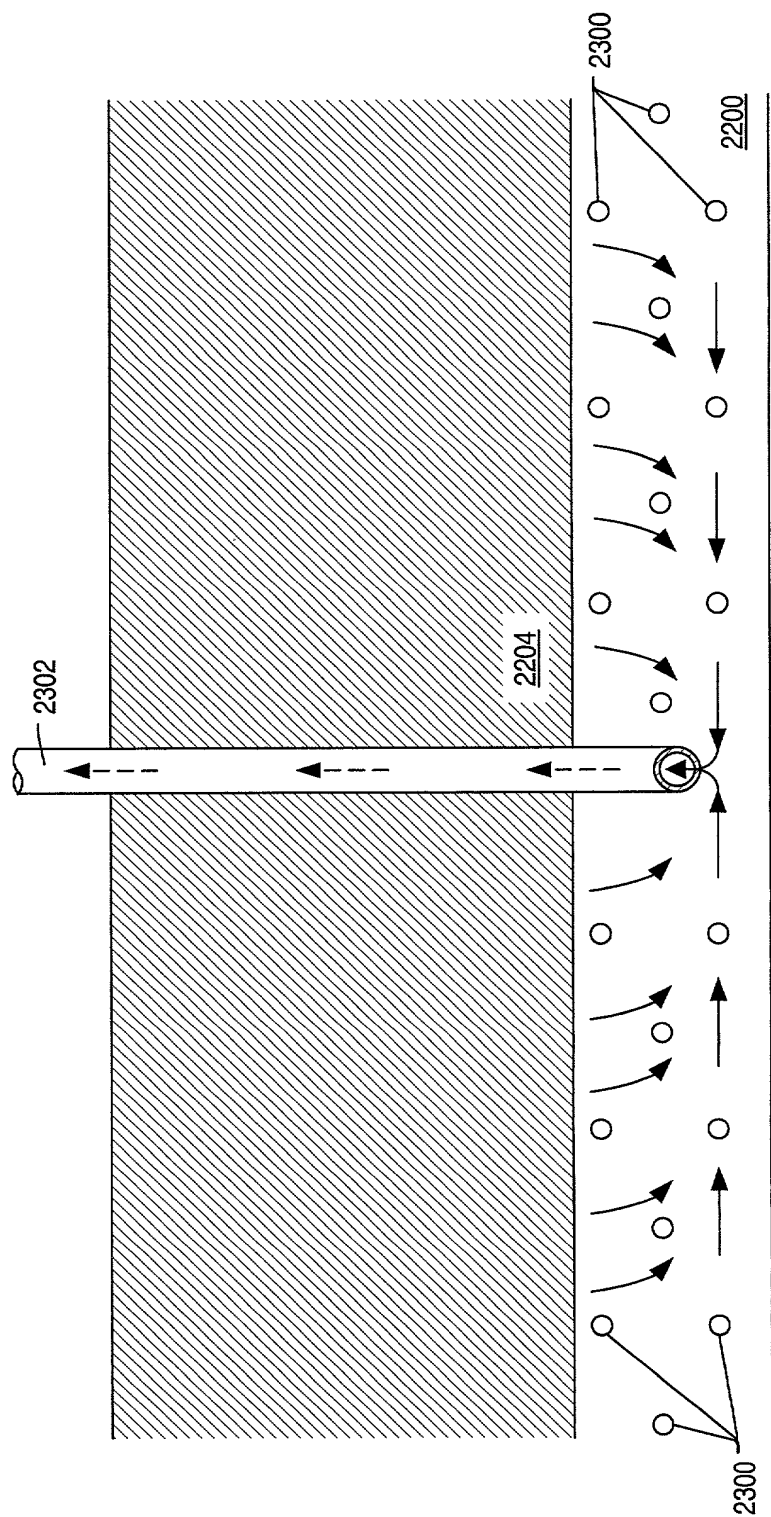


FIG. 48

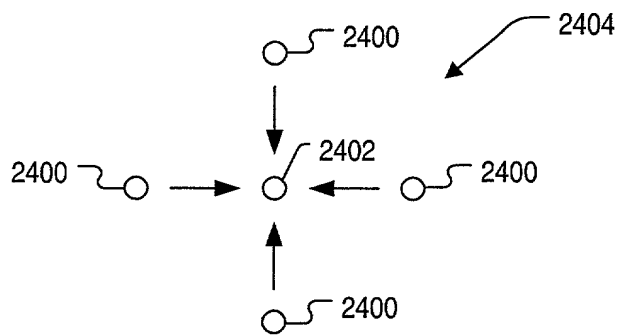


FIG. 49

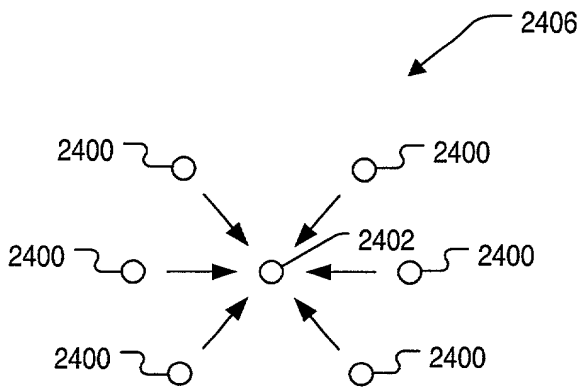


FIG. 50

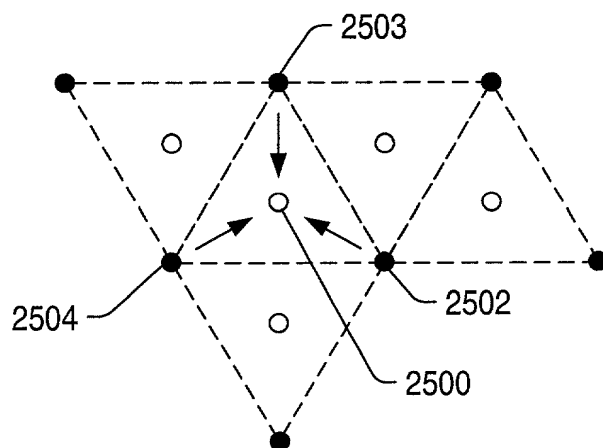


FIG. 51

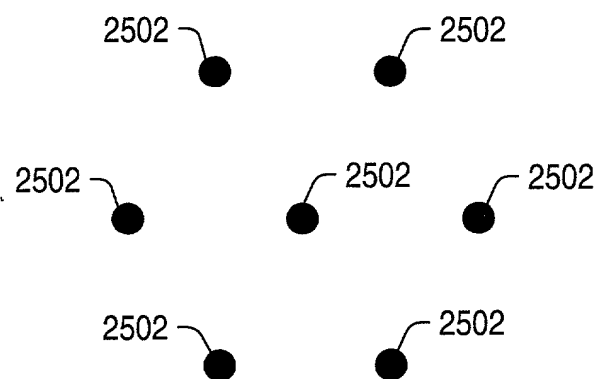


FIG. 52

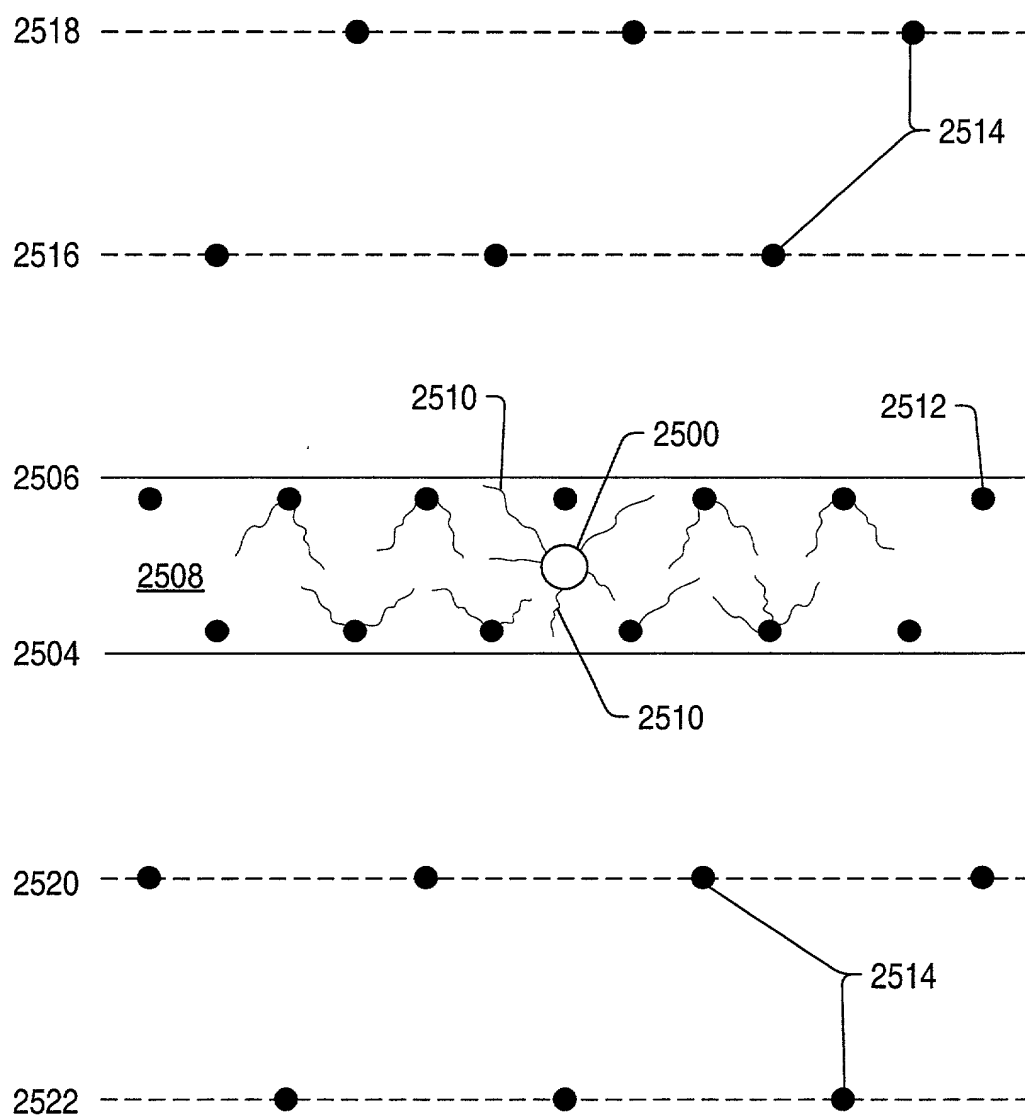


FIG. 53

FIG. 54 is a schematic diagram of a system 2500. The system 2500 includes a first elongated component 2540 and a second elongated component 2540. The first elongated component 2540 is connected to a first dashed line 2542. The second elongated component 2540 is connected to a second dashed line 2544. The first elongated component 2540 is connected to the second elongated component 2540 via a first dashed line 2552. The first elongated component 2540 is connected to the second elongated component 2540 via a second dashed line 2550. The first elongated component 2540 is connected to the second elongated component 2540 via a third dashed line 2548.

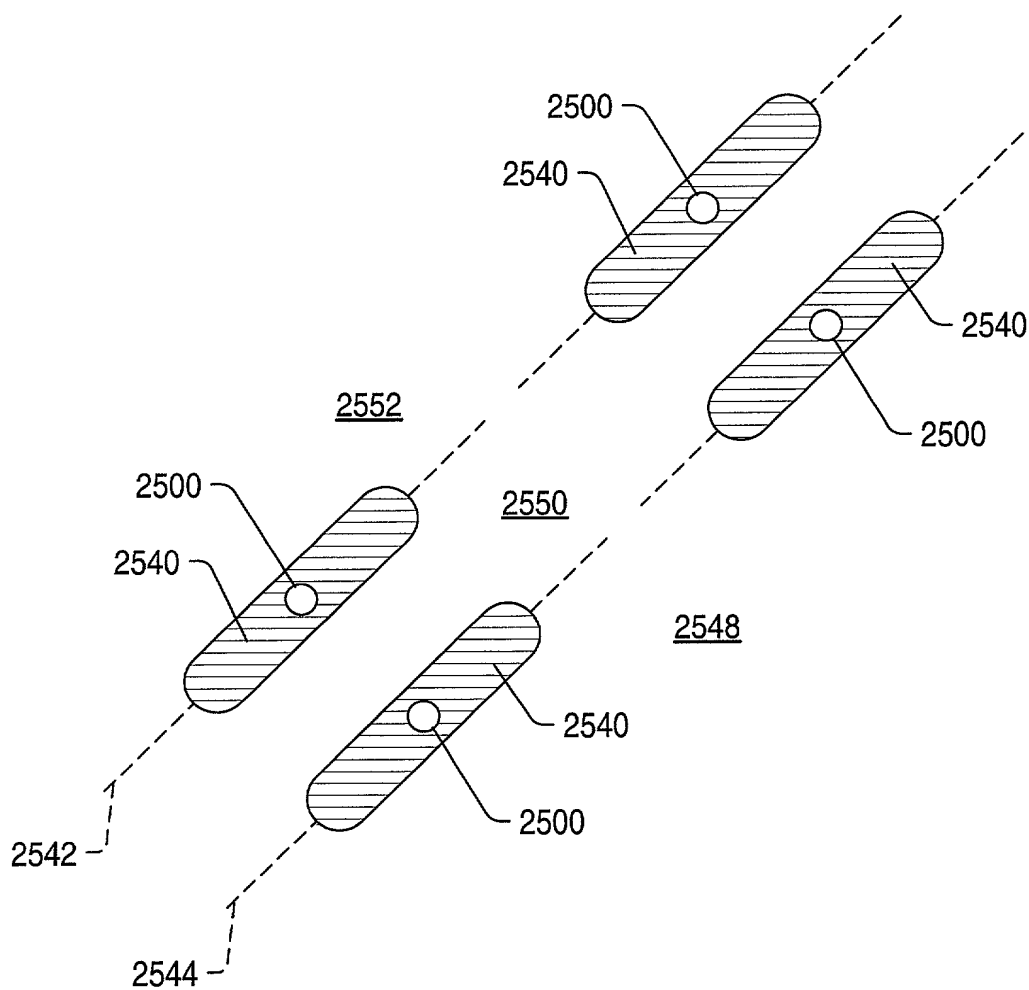


FIG. 54

FIG. 55 is a schematic diagram of a system 2600. The system 2600 includes a central processing unit 2602, a memory unit 2604, and a network interface unit 2606. The system 2600 is connected to a network 2608 via a network interface unit 2606. The system 2600 is also connected to a storage device 2610 via a storage interface unit 2612. The system 2600 is further connected to a user interface 2614 via a user interface unit 2616. The system 2600 is also connected to a power supply 2618 via a power supply unit 2620. The system 2600 is also connected to a cooling system 2622 via a cooling system unit 2624. The system 2600 is also connected to a security system 2626 via a security system unit 2628. The system 2600 is also connected to a monitoring system 2630 via a monitoring system unit 2632. The system 2600 is also connected to a logging system 2634 via a logging system unit 2636. The system 2600 is also connected to a backup system 2638 via a backup system unit 2640. The system 2600 is also connected to a disaster recovery system 2642 via a disaster recovery system unit 2644. The system 2600 is also connected to a recovery system 2646 via a recovery system unit 2648. The system 2600 is also connected to a restoration system 2650 via a restoration system unit 2652. The system 2600 is also connected to a recovery system 2654 via a recovery system unit 2656. The system 2600 is also connected to a restoration system 2658 via a restoration system unit 2660. The system 2600 is also connected to a recovery system 2662 via a recovery system unit 2664. The system 2600 is also connected to a restoration system 2666 via a restoration system unit 2668. The system 2600 is also connected to a recovery system 2670 via a recovery system unit 2672. The system 2600 is also connected to a restoration system 2674 via a restoration system unit 2676. The system 2600 is also connected to a recovery system 2678 via a recovery system unit 2680. The system 2600 is also connected to a restoration system 2682 via a restoration system unit 2684. The system 2600 is also connected to a recovery system 2686 via a recovery system unit 2688. The system 2600 is also connected to a restoration system 2690 via a restoration system unit 2692. The system 2600 is also connected to a recovery system 2694 via a recovery system unit 2696. The system 2600 is also connected to a restoration system 2698 via a restoration system unit 2699.

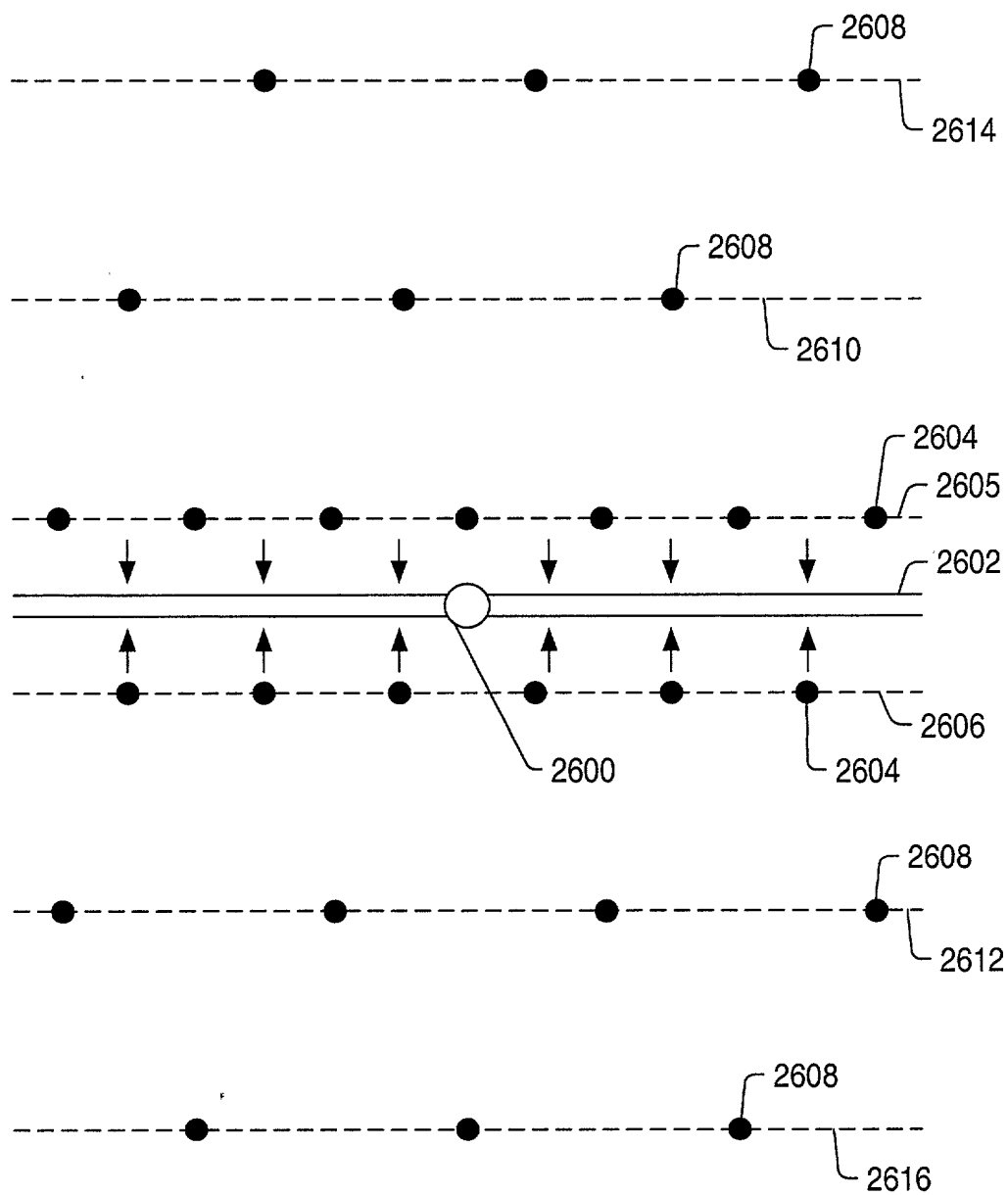


FIG. 55

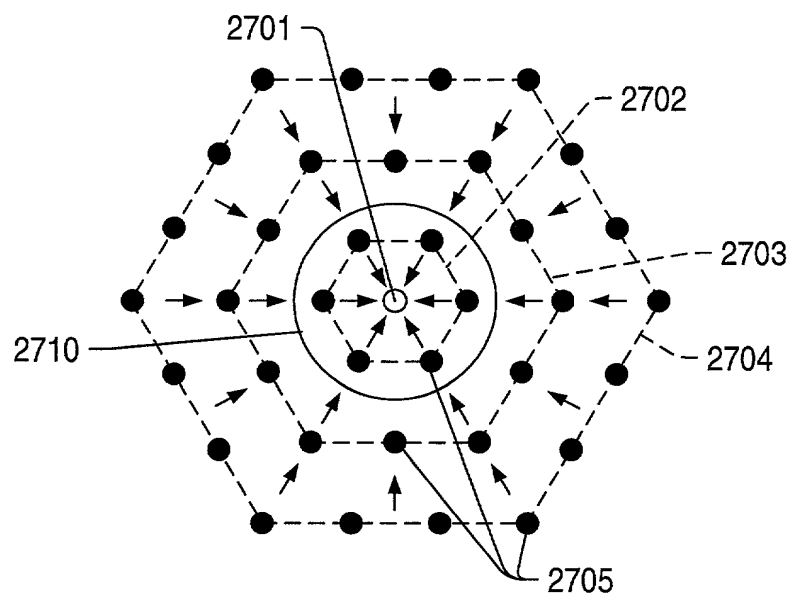


FIG. 57

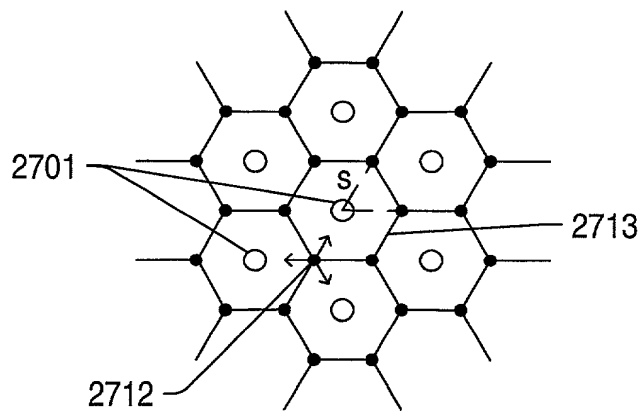


FIG. 58

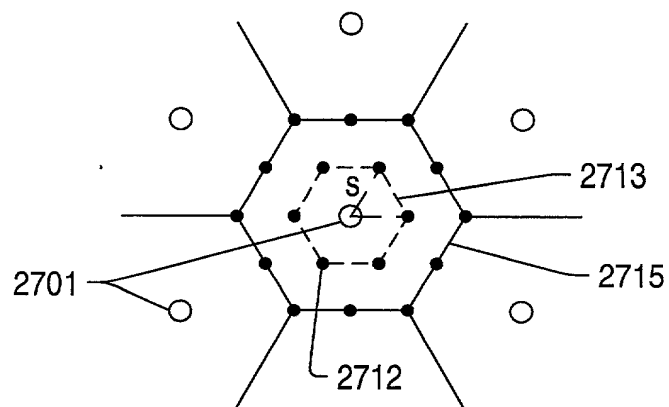


FIG. 59

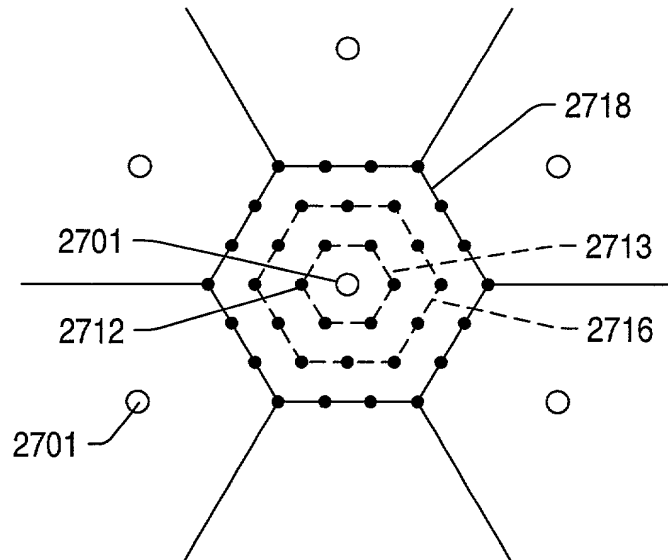


FIG. 60

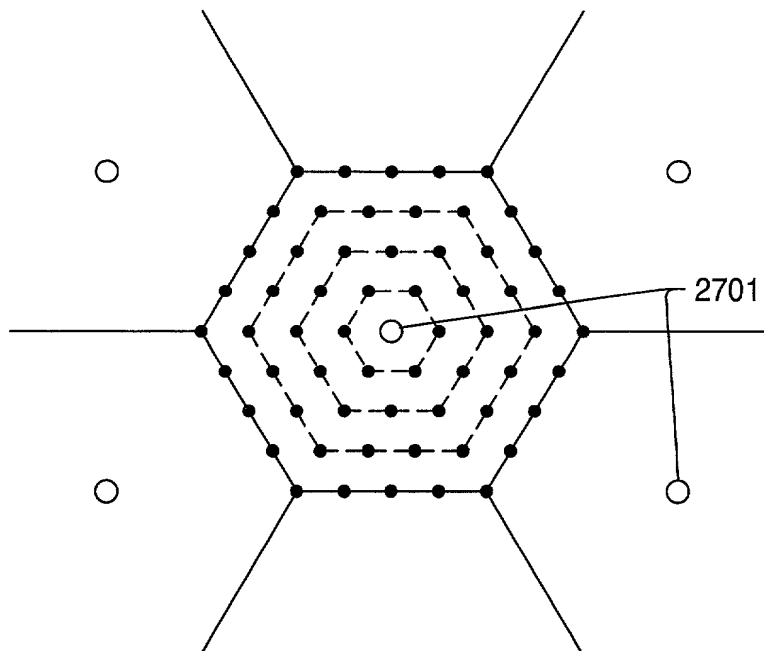


FIG. 61

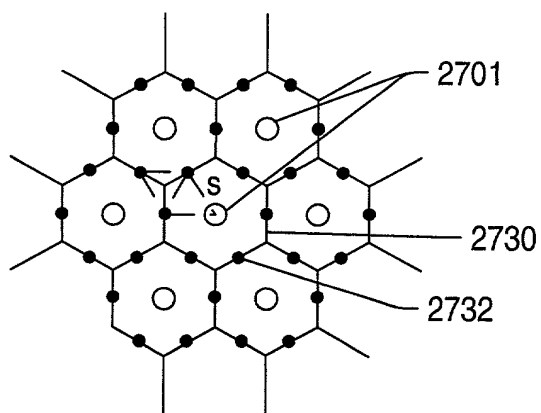


FIG. 62

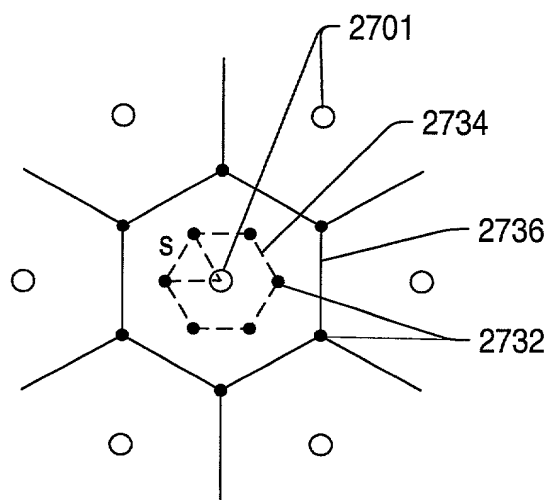


FIG. 63

FIG. 64 is a schematic diagram of a hexagonal unit cell of a crystal lattice. The unit cell is defined by a dashed hexagon. The vertices of the unit cell are labeled 2701. The center of the unit cell is labeled 2738. The midpoints of the edges of the unit cell are labeled 2732. The midpoints of the edges of the unit cell are labeled 2740. The unit cell is surrounded by other unit cells, indicated by dashed lines and circles.

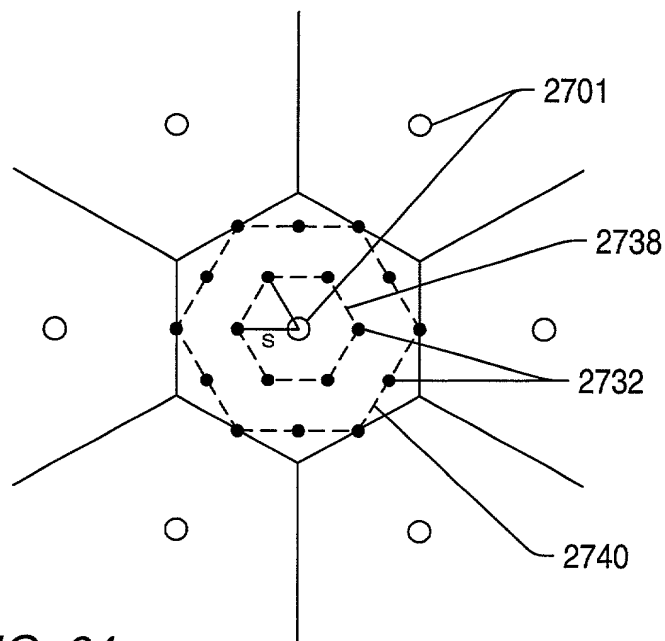


FIG. 64

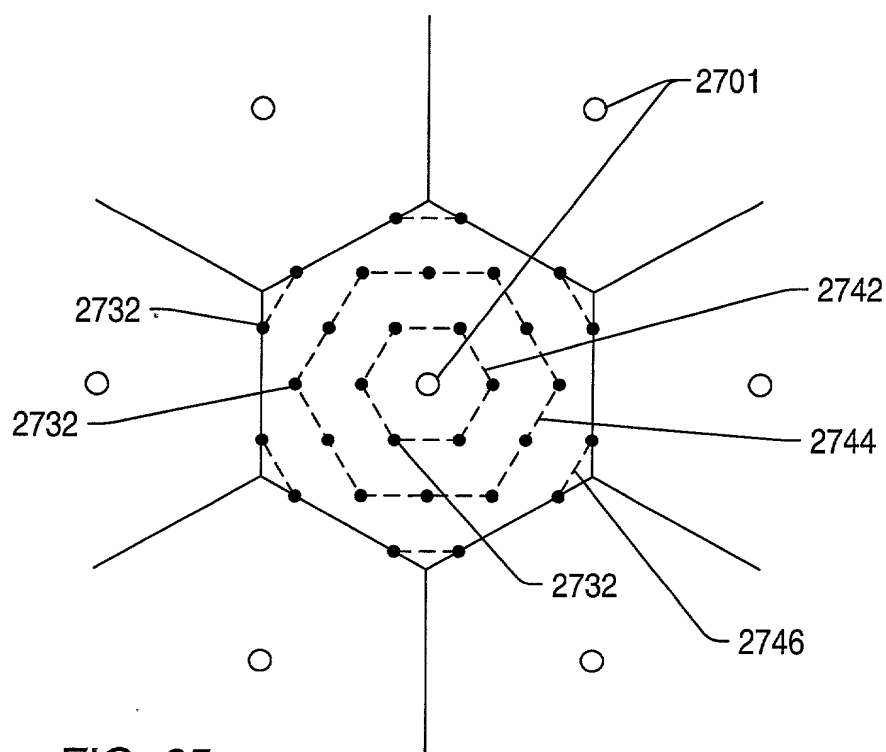


FIG. 65

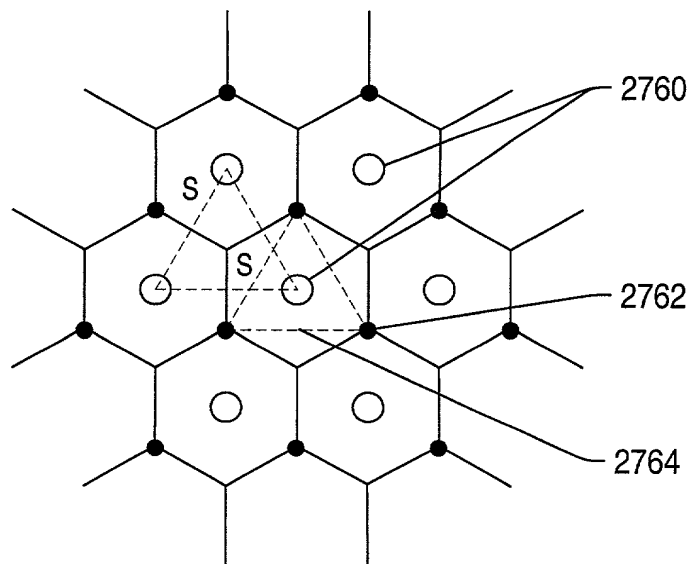


FIG. 66

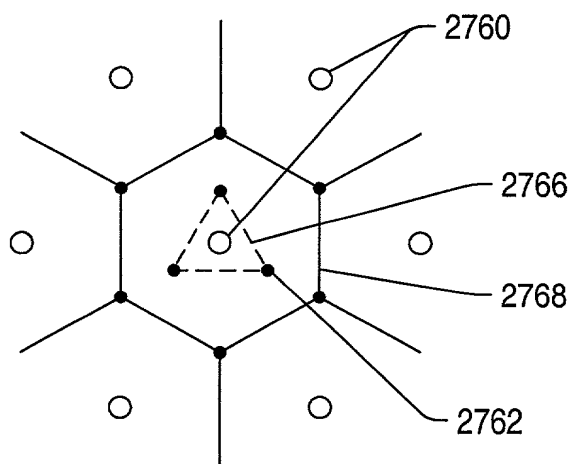


FIG. 67

FIG. 68 is a schematic diagram of a hexagonal unit cell of a crystal structure. The unit cell is defined by a hexagonal outline. Inside the unit cell, there are several points represented by dots. A dashed line connects some of these points, forming a smaller hexagonal shape. Outside the unit cell, there are several circles representing atoms or ions. The diagram is labeled with reference numerals 2760, 2772, 2762, and 2770.

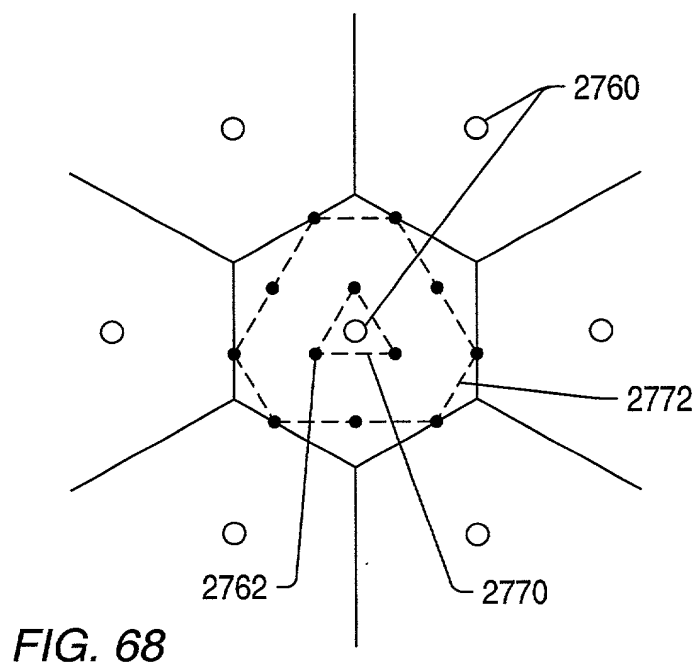


FIG. 68

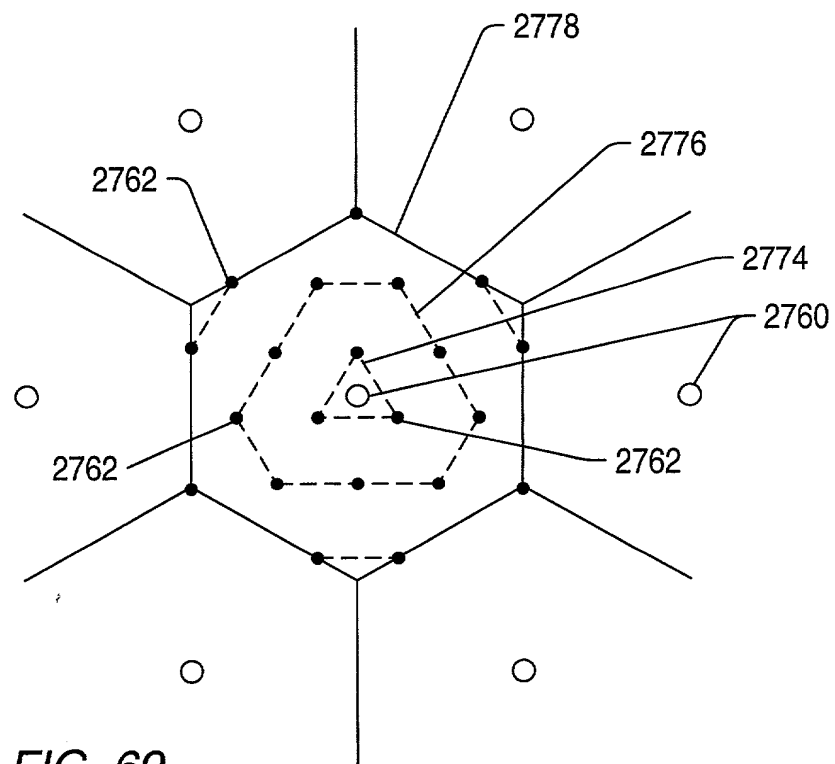


FIG. 69

FIG. 70 is a schematic diagram of a triangular structure. The structure is composed of a large outer triangle and a smaller inner triangle. The outer triangle is defined by dashed lines and has vertices labeled 2701, 2705, and 2784. The inner triangle is also defined by dashed lines and has vertices labeled 2780, 2782, and 2784. Arrows indicate a flow or direction from the outer vertices towards the inner vertices. A central point is marked with a circle containing a dot.

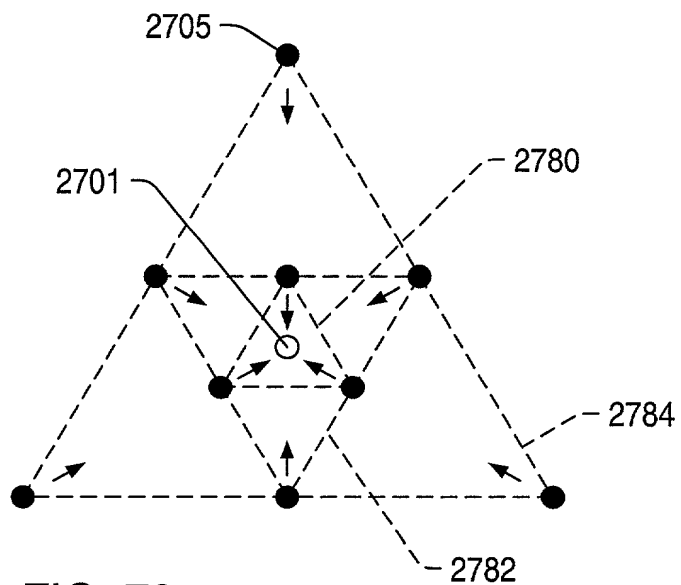
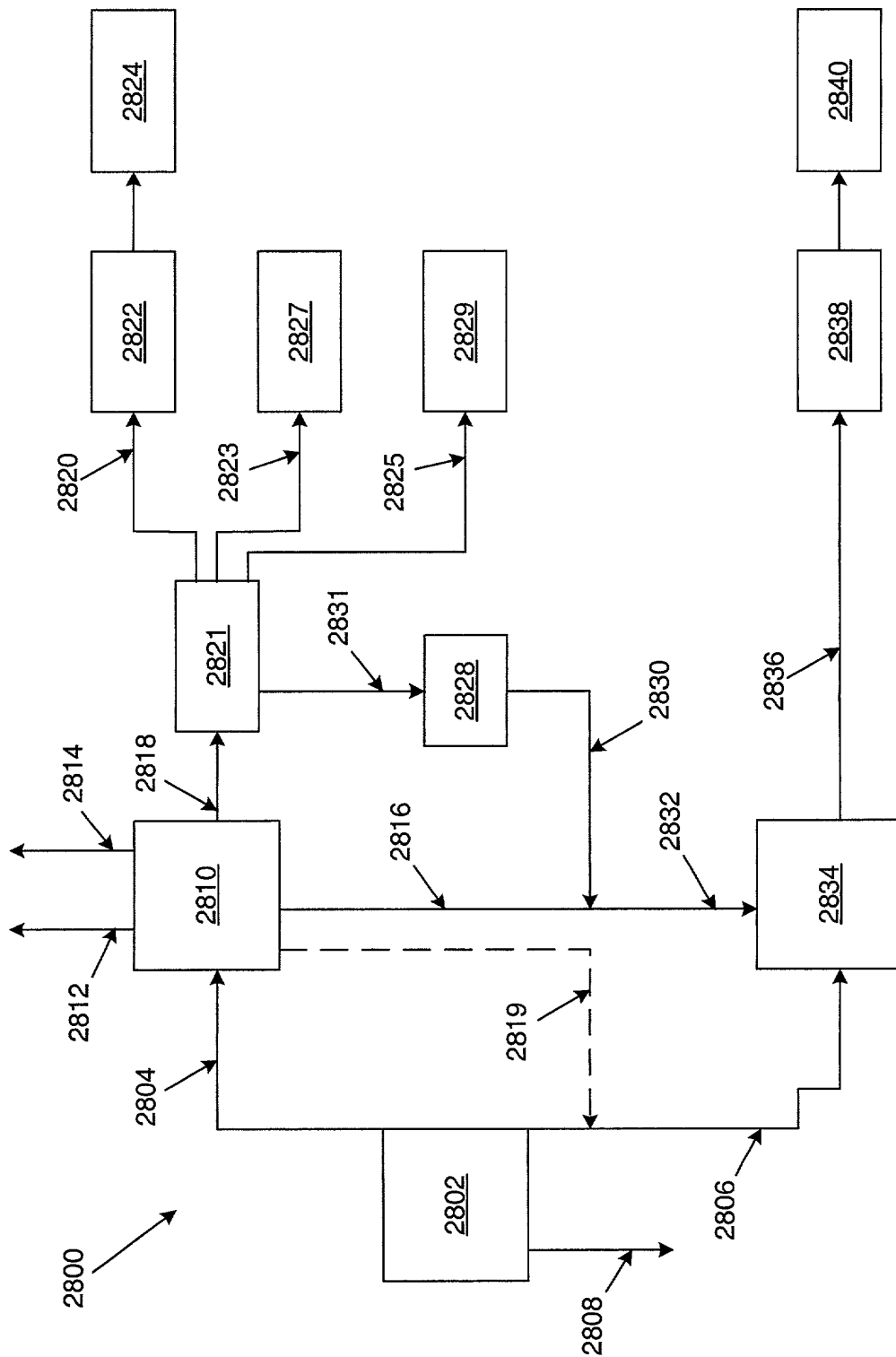


FIG. 70



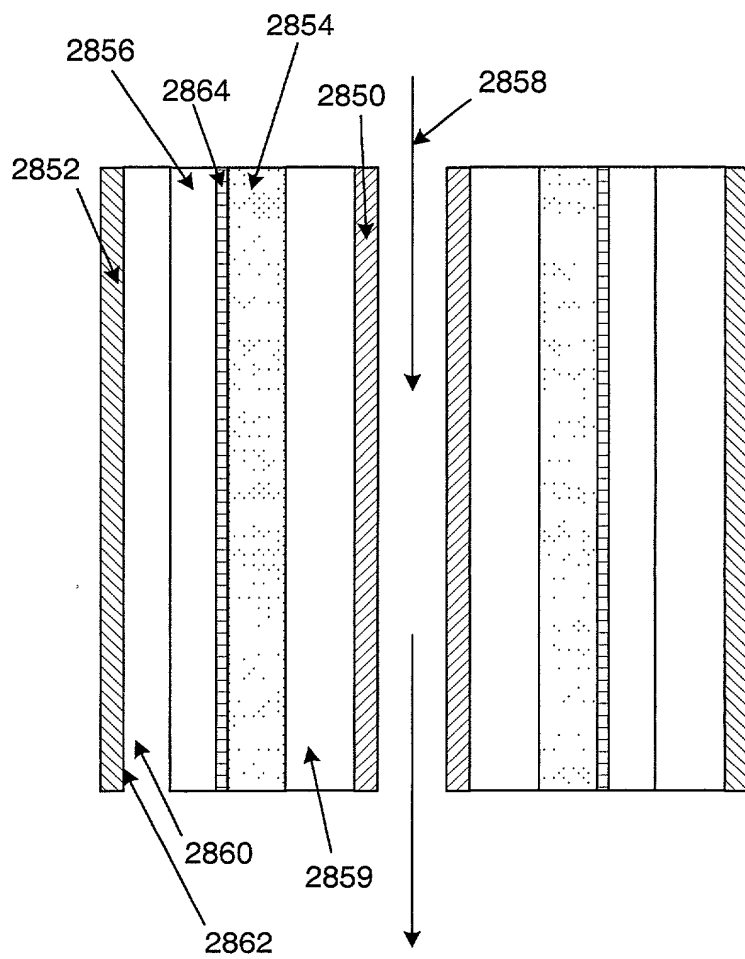


Fig. 72

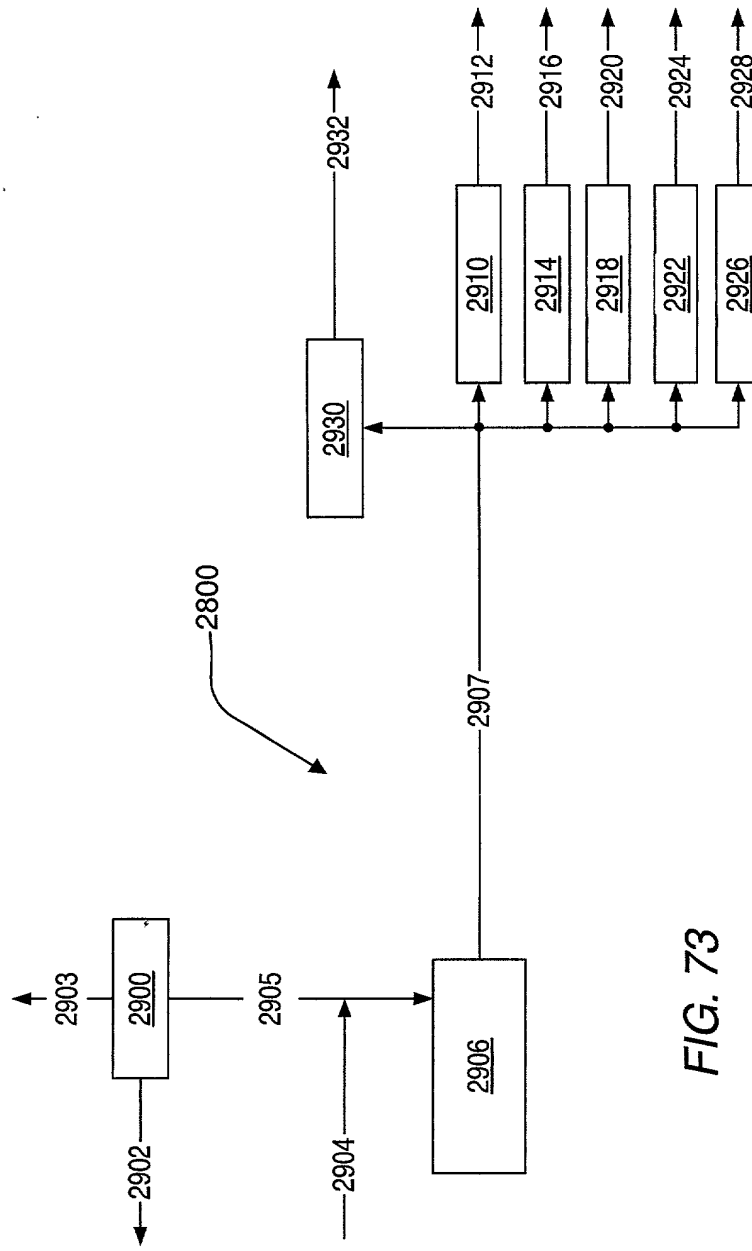


FIG. 73

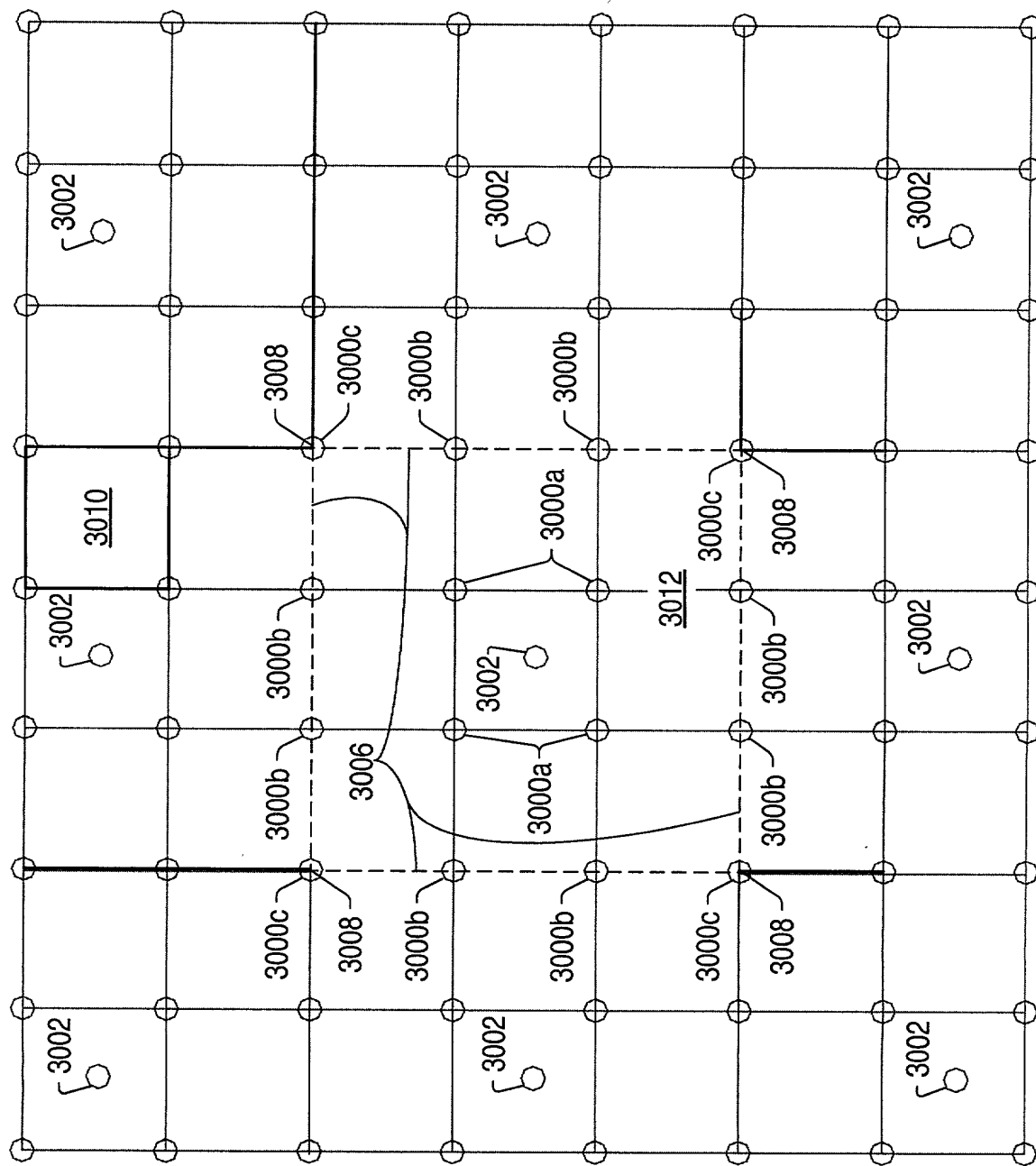


FIG. 74

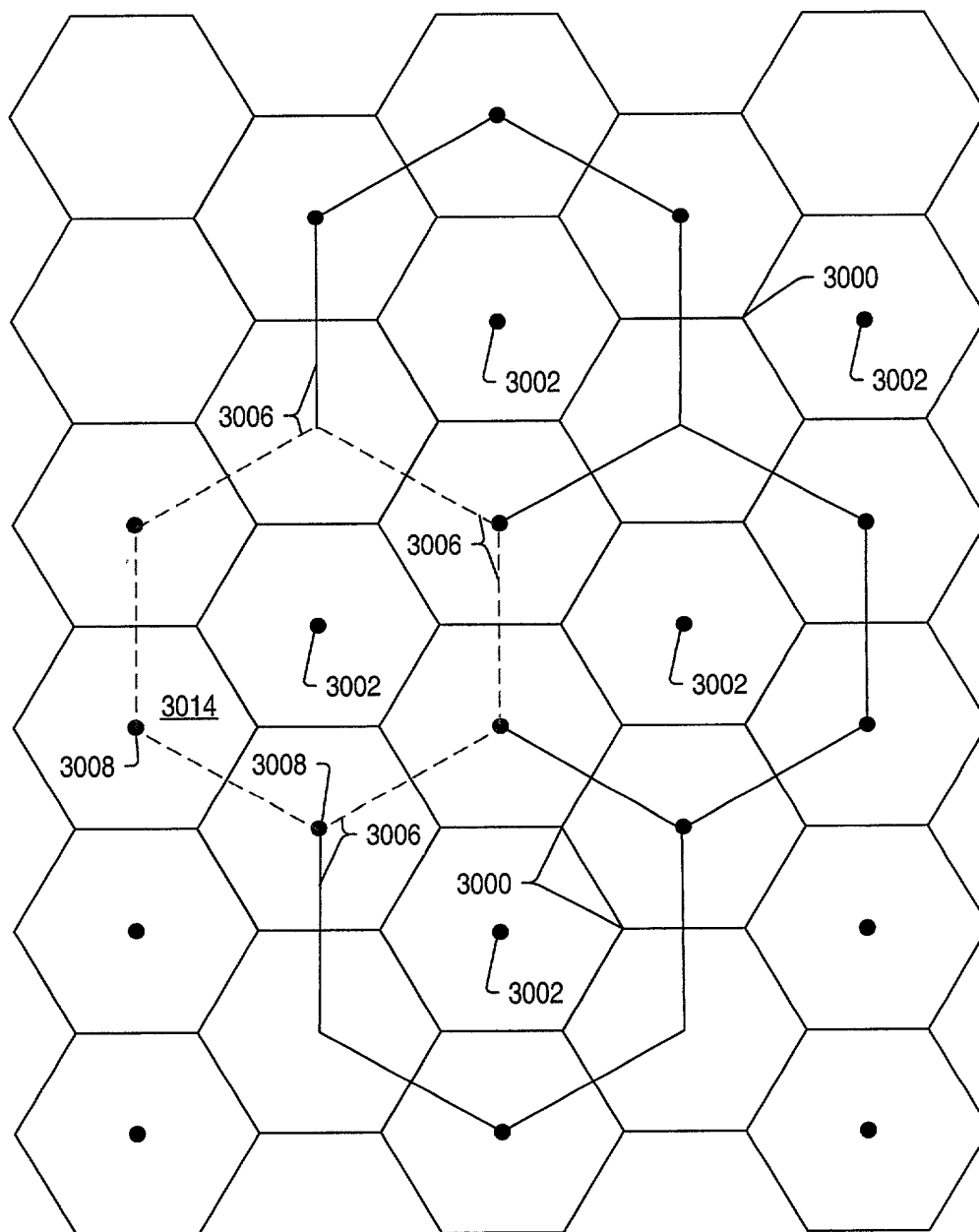


FIG. 75

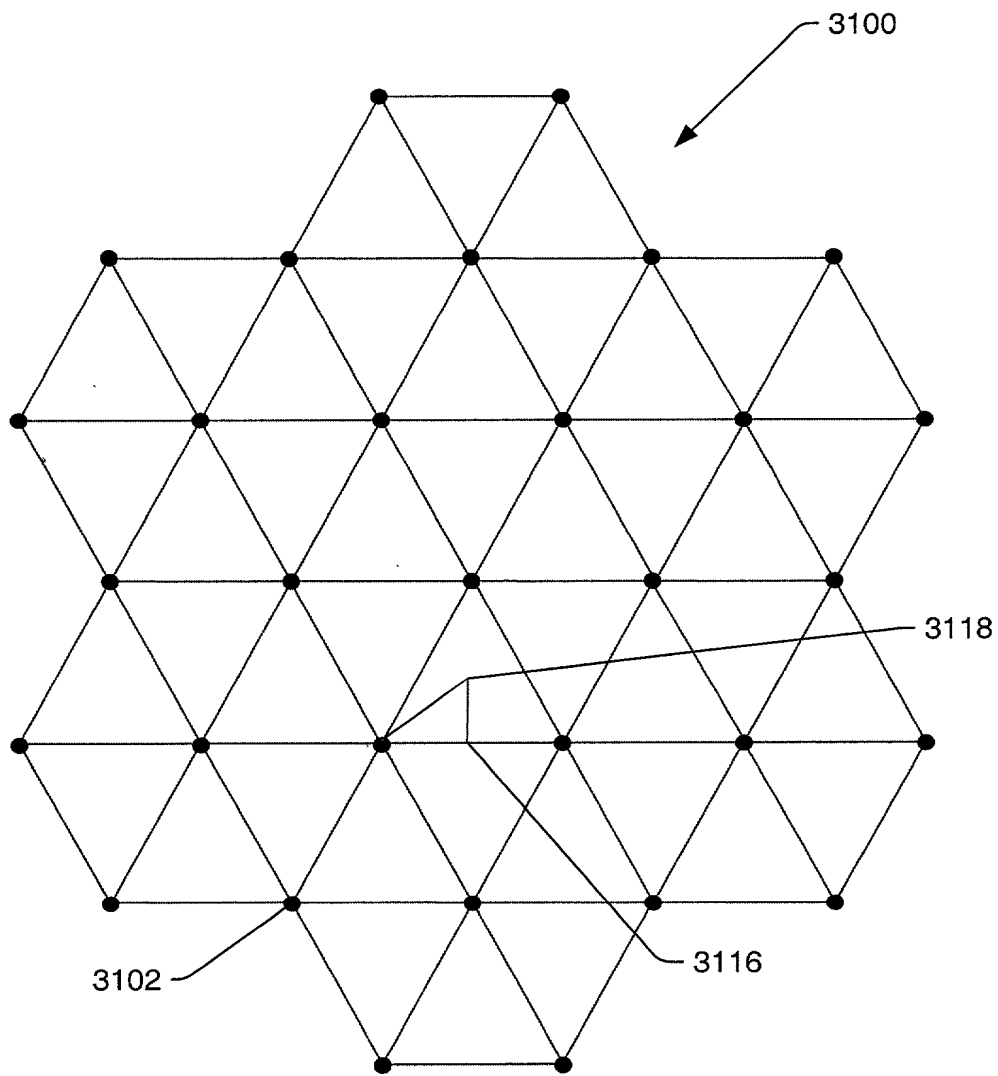


FIG. 76

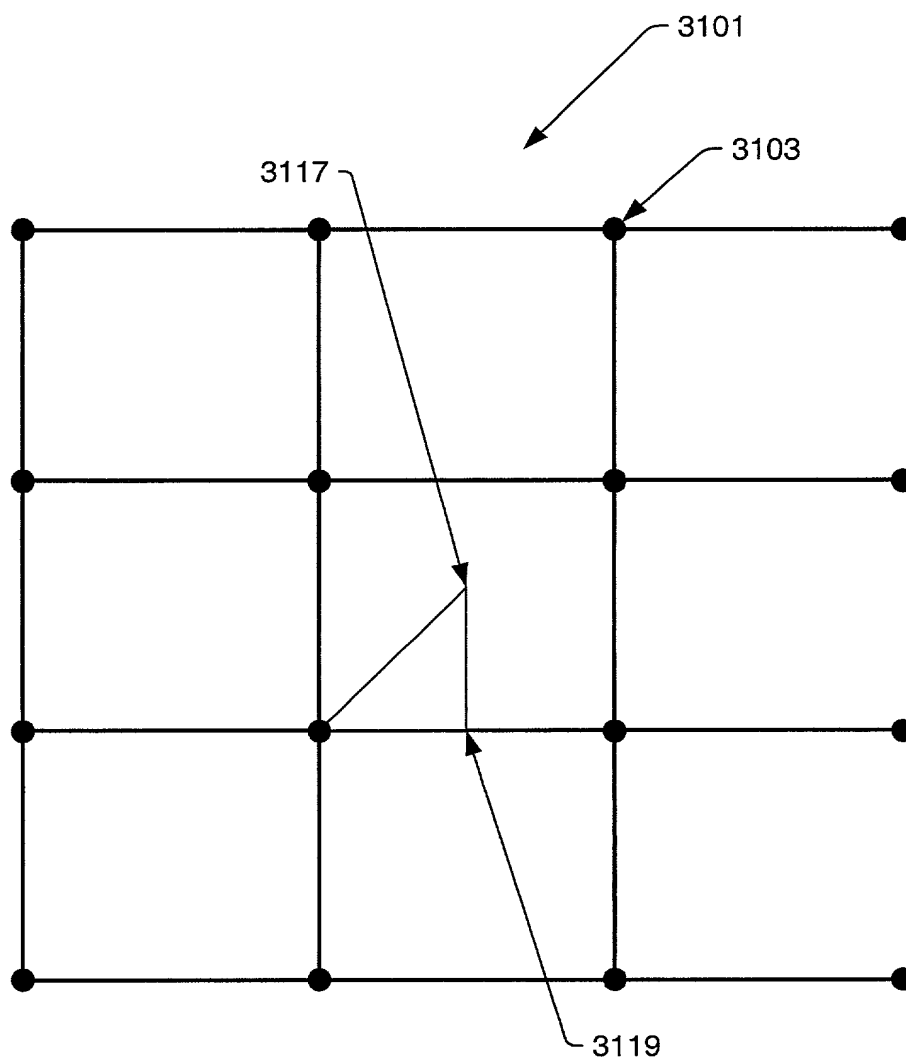


FIG. 76a

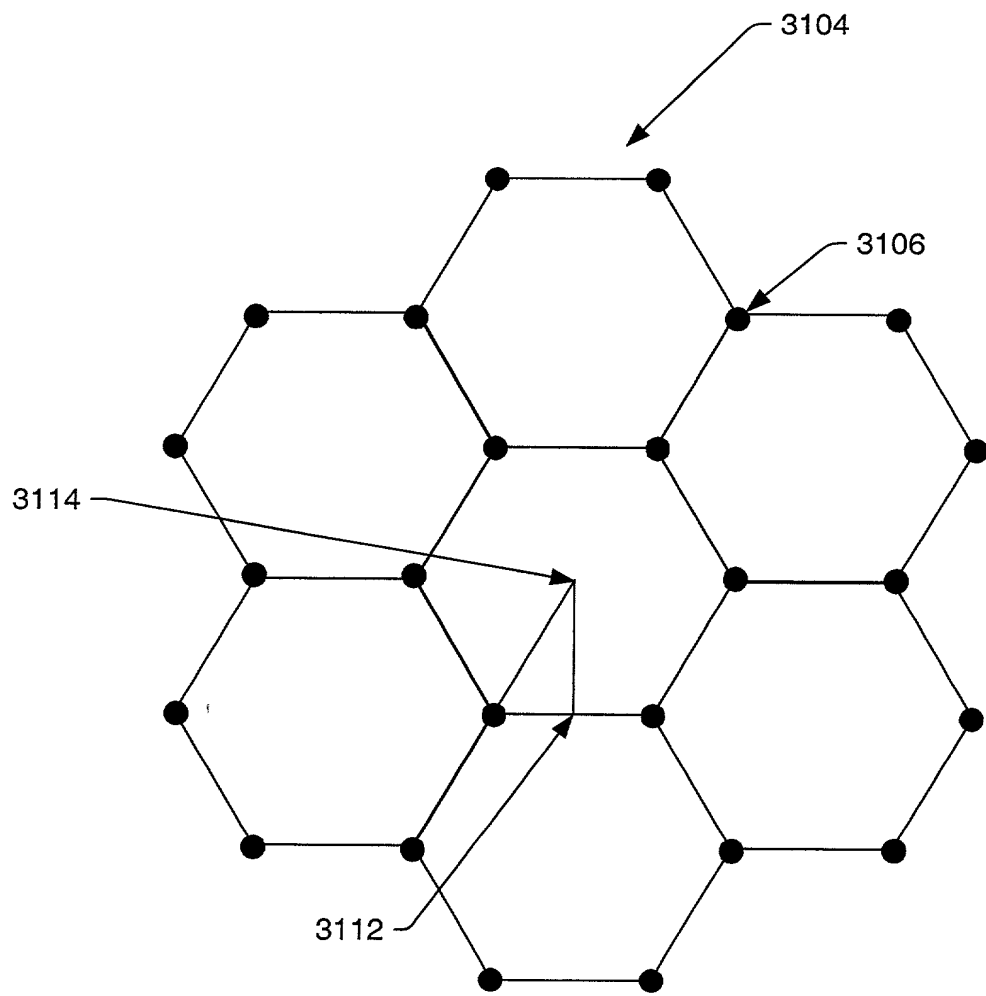


FIG. 77

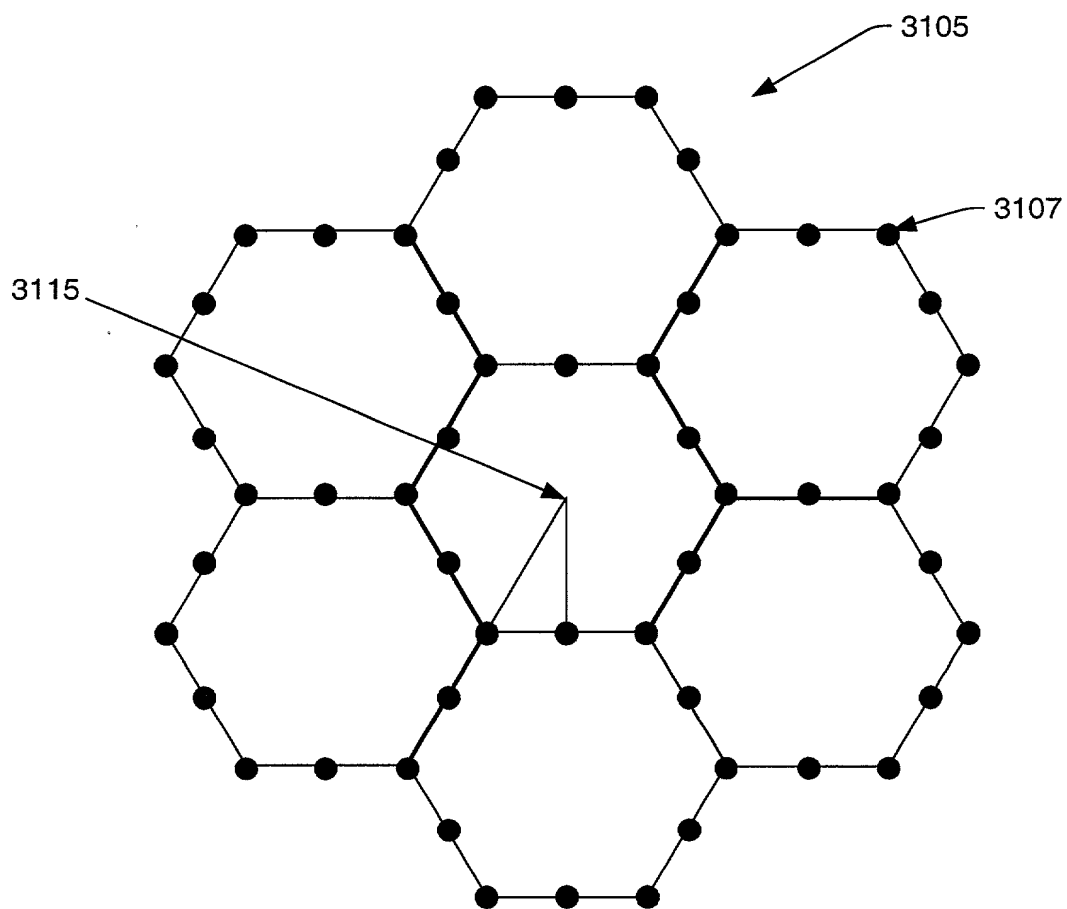


FIG. 77a

3110

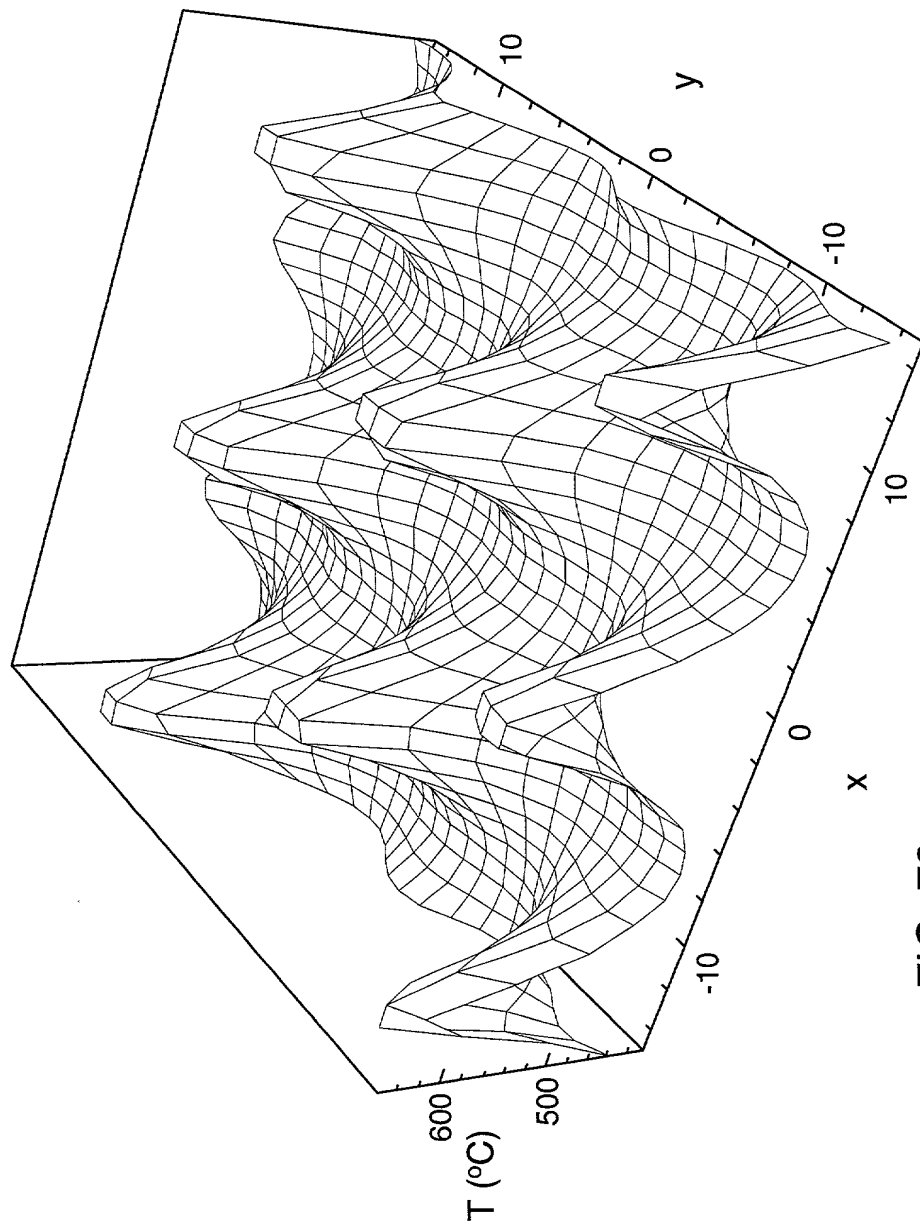


FIG. 78

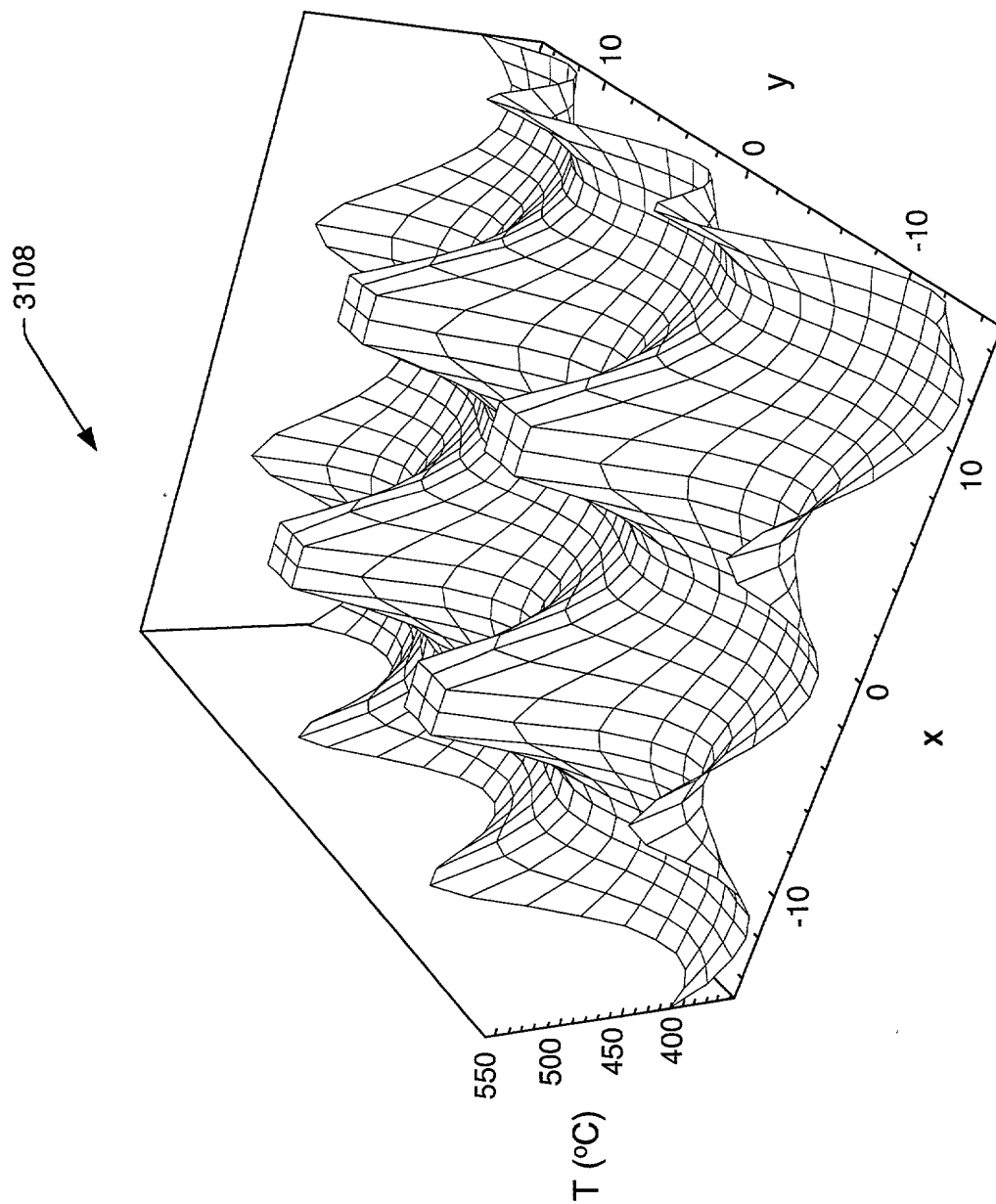


FIG. 79

3109

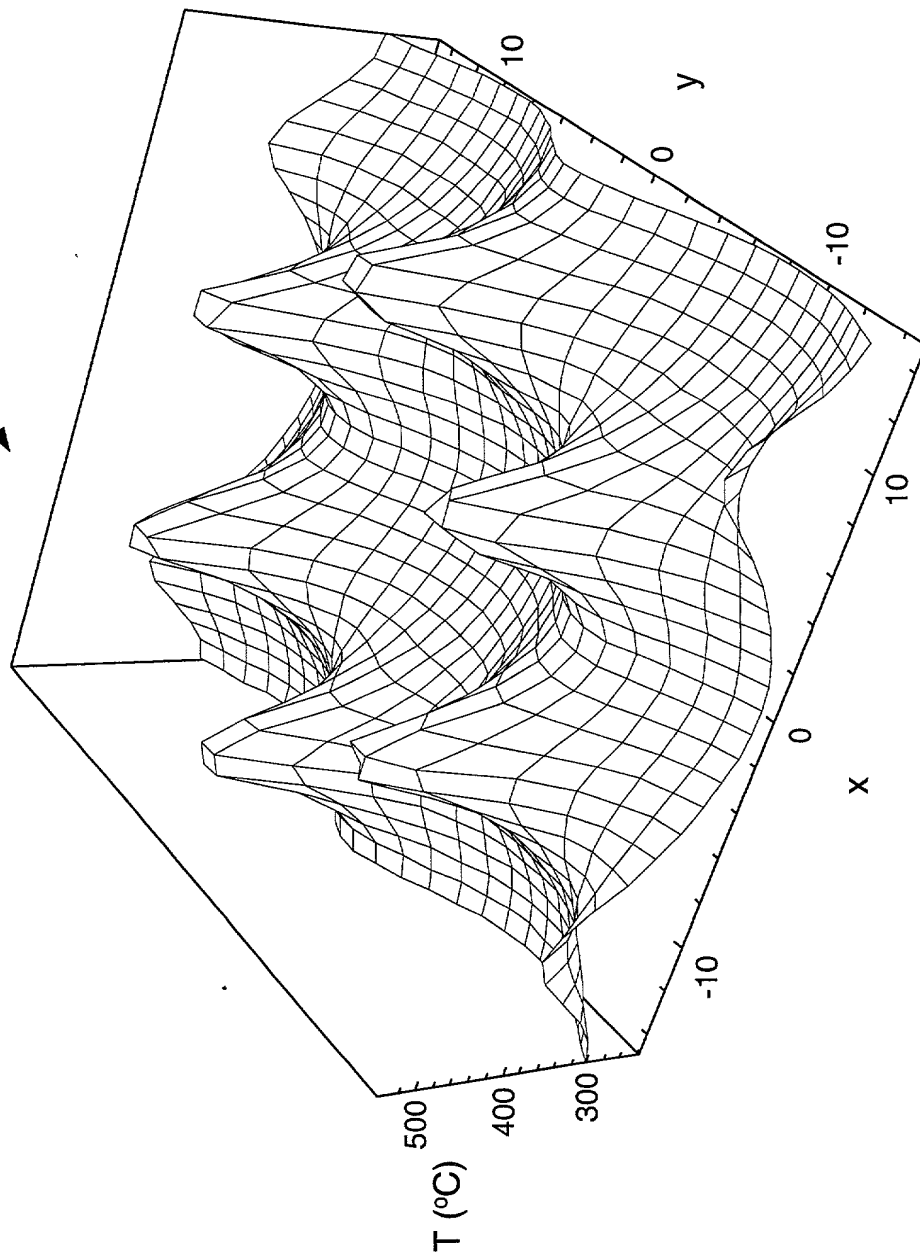


FIG. 79a

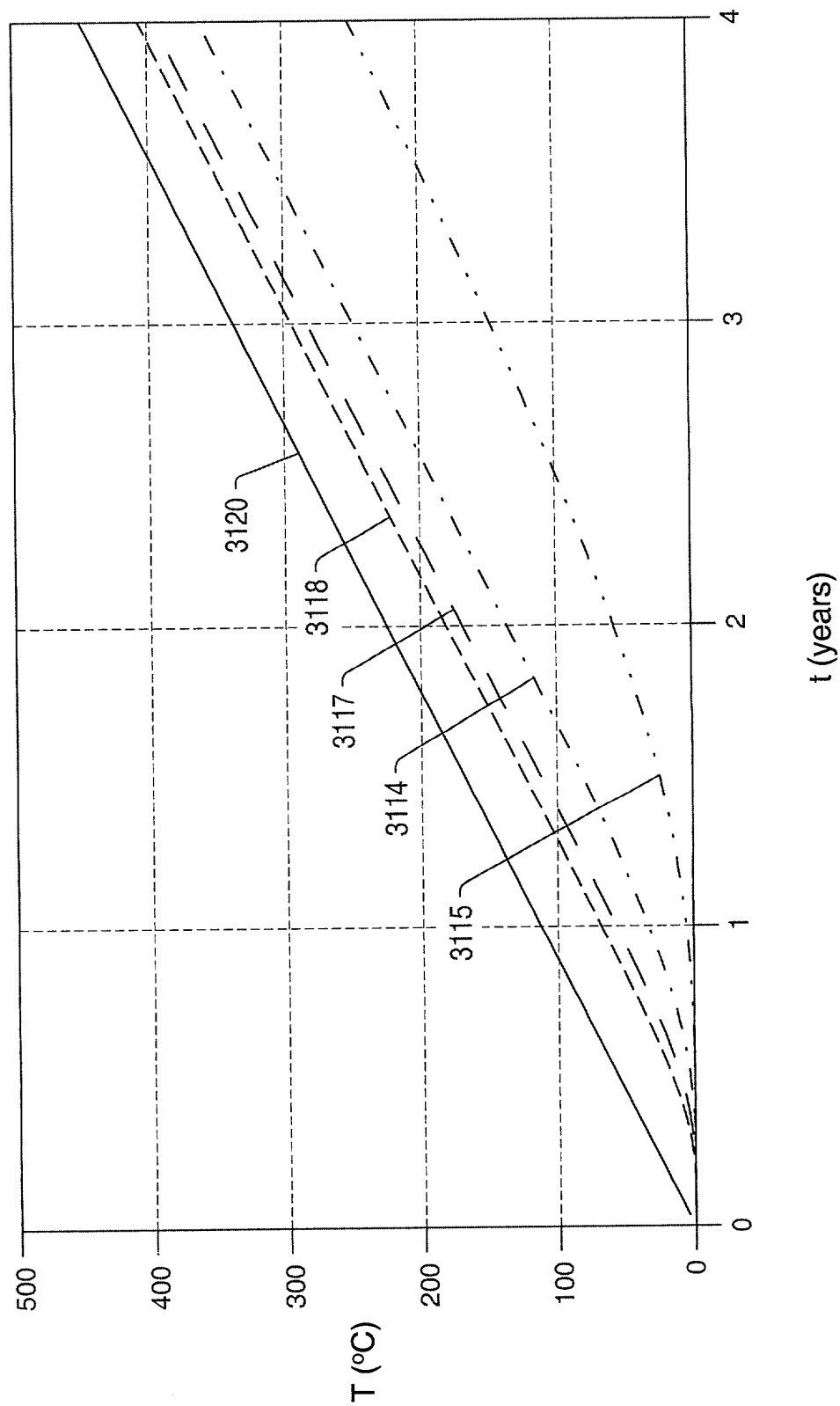


FIG. 80

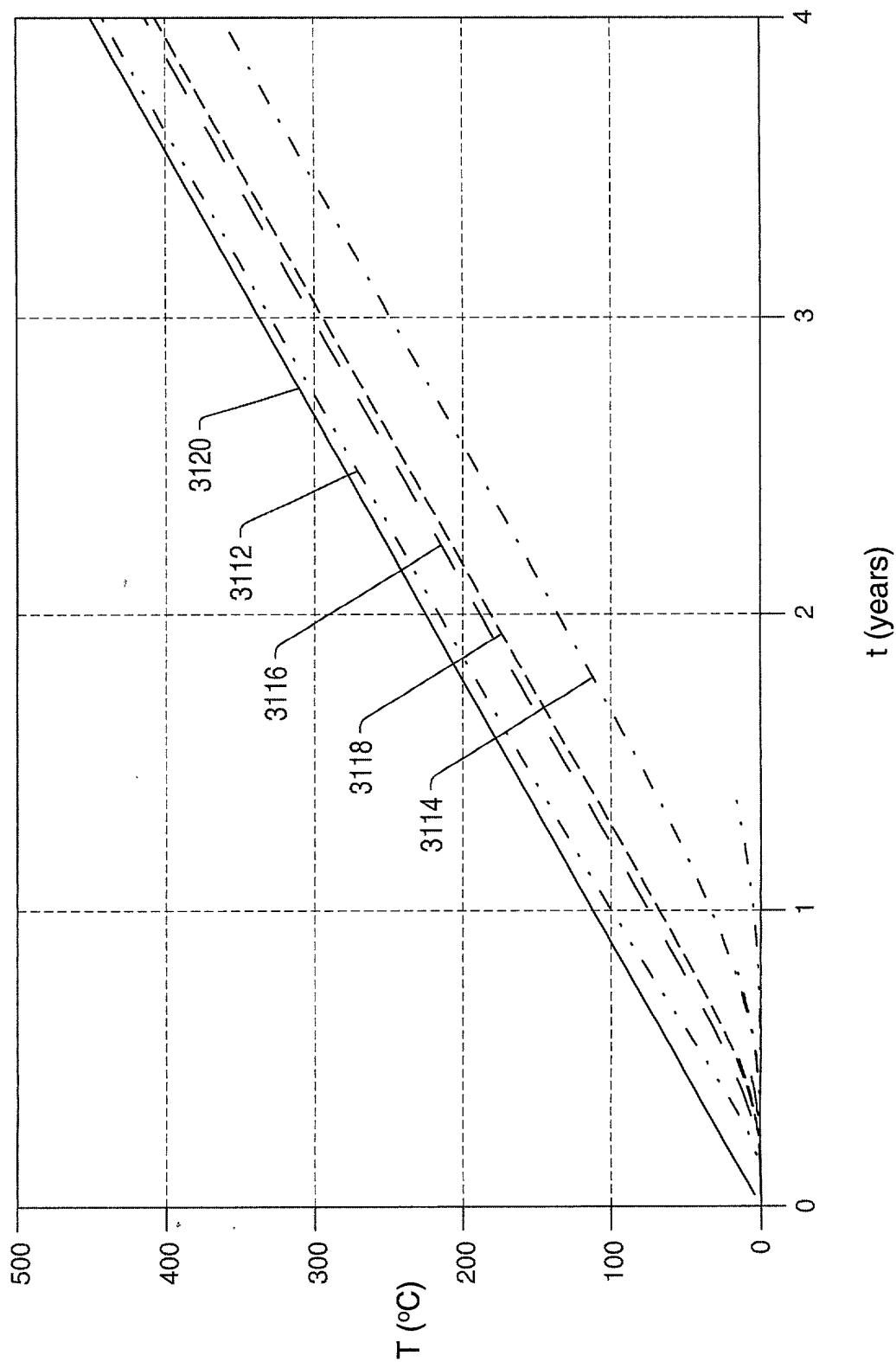


FIG. 81

FIG. 81a is a graph showing the temperature T (°C) versus time t (years) for three different cases: 3118, 3119, and 3120. The temperature T (°C) is plotted on the vertical axis, ranging from 0 to 500. The time t (years) is plotted on the horizontal axis, ranging from 0 to 4. The graph shows that the temperature decreases over time for all three cases, with case 3118 showing the highest temperature and case 3120 showing the lowest temperature.

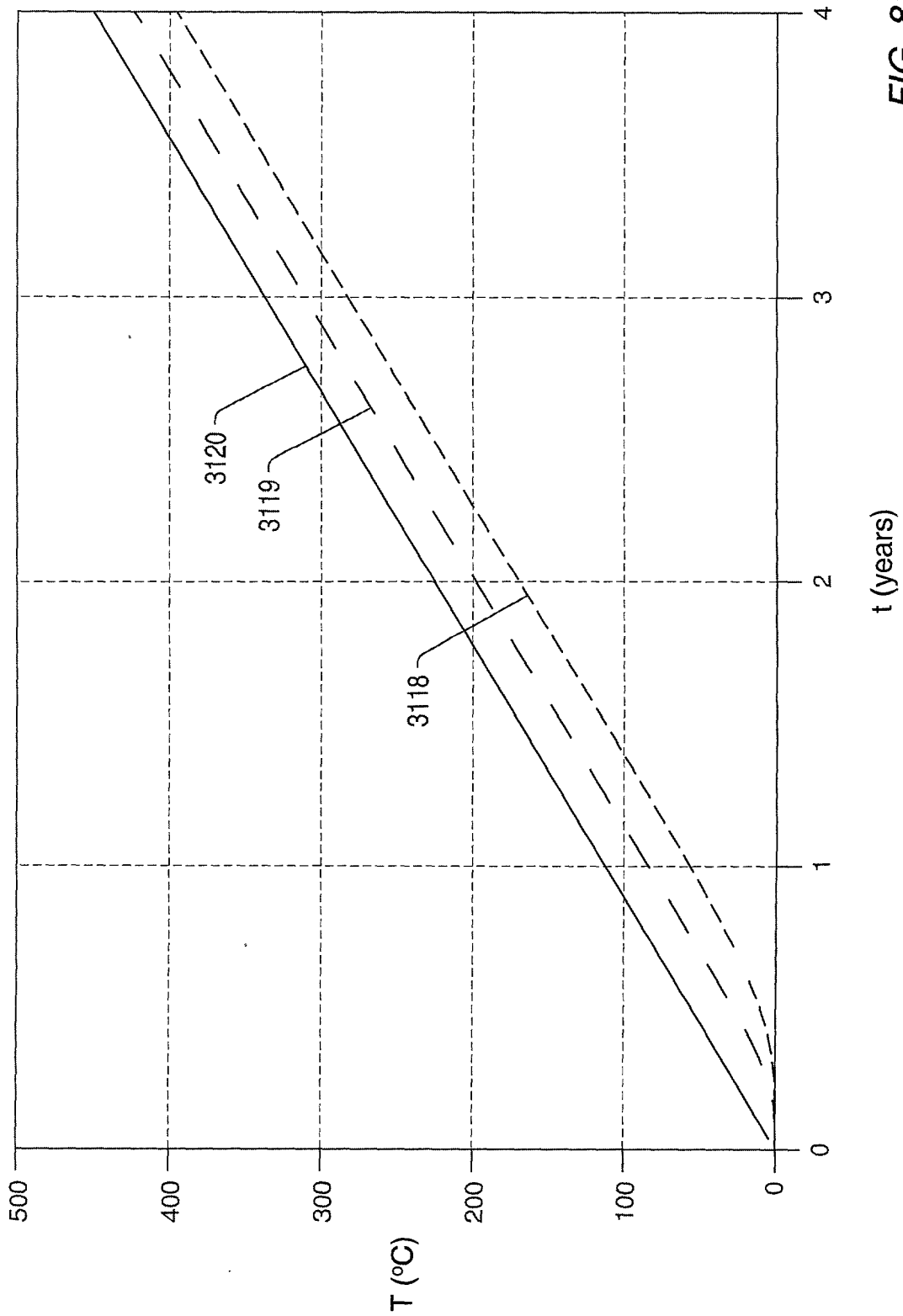


FIG. 81a

FIG. 81b is a graph showing the temperature T (°C) versus time t (years) for a system. The graph includes several curves labeled 3114, 3117, 3118, and 3120, which represent different thermal profiles over time.

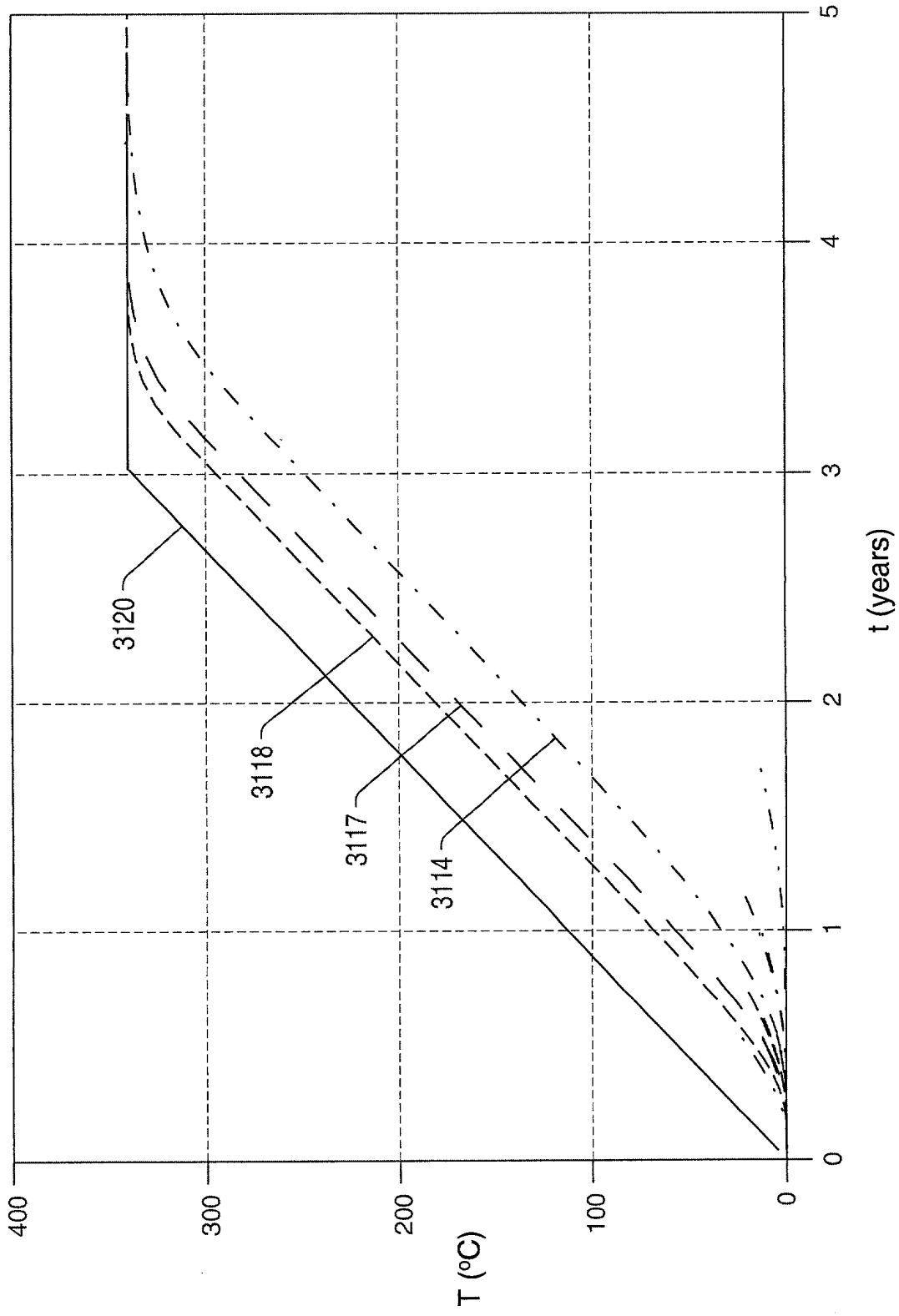


FIG. 81b

FIG. 82

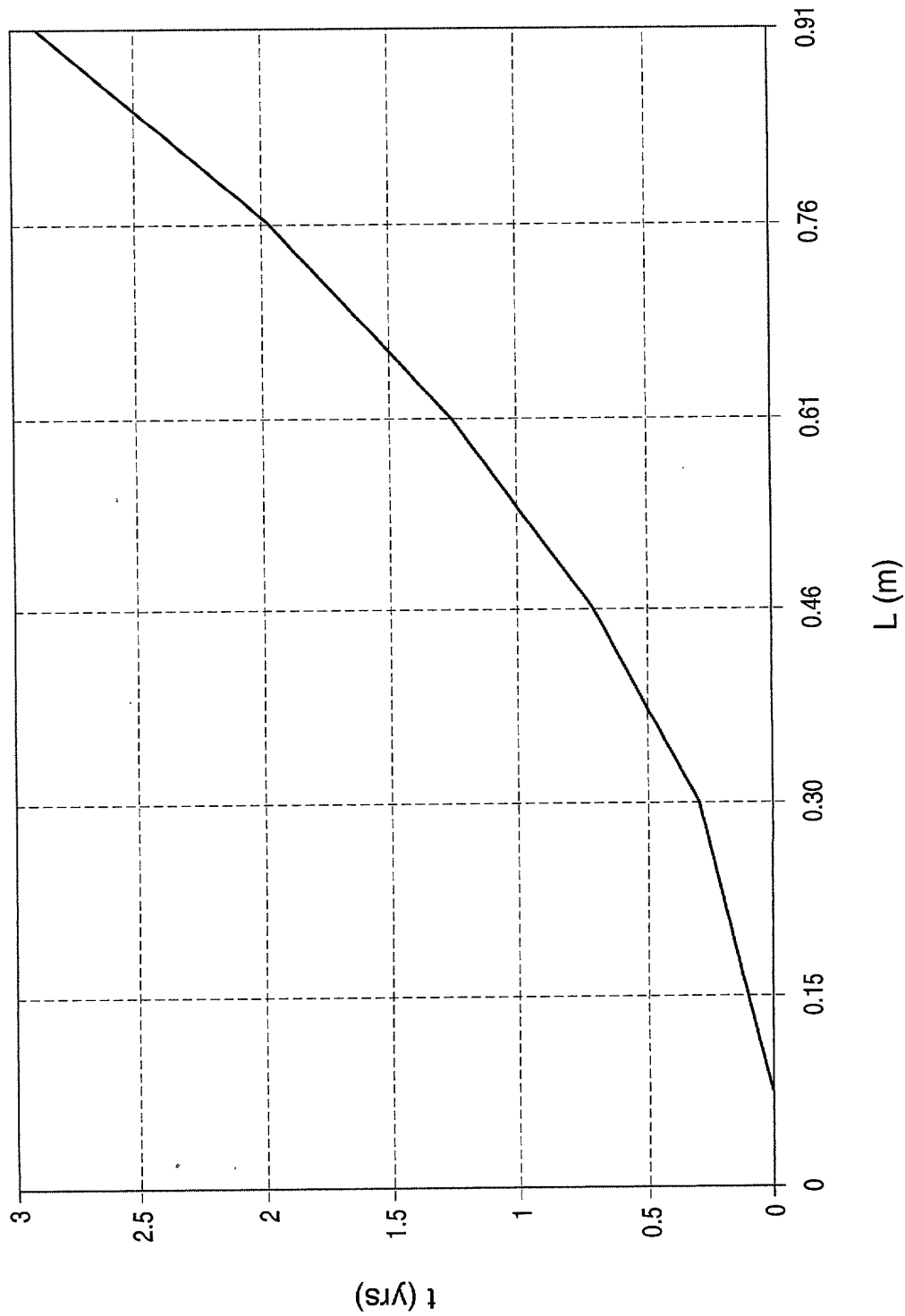


FIG. 82

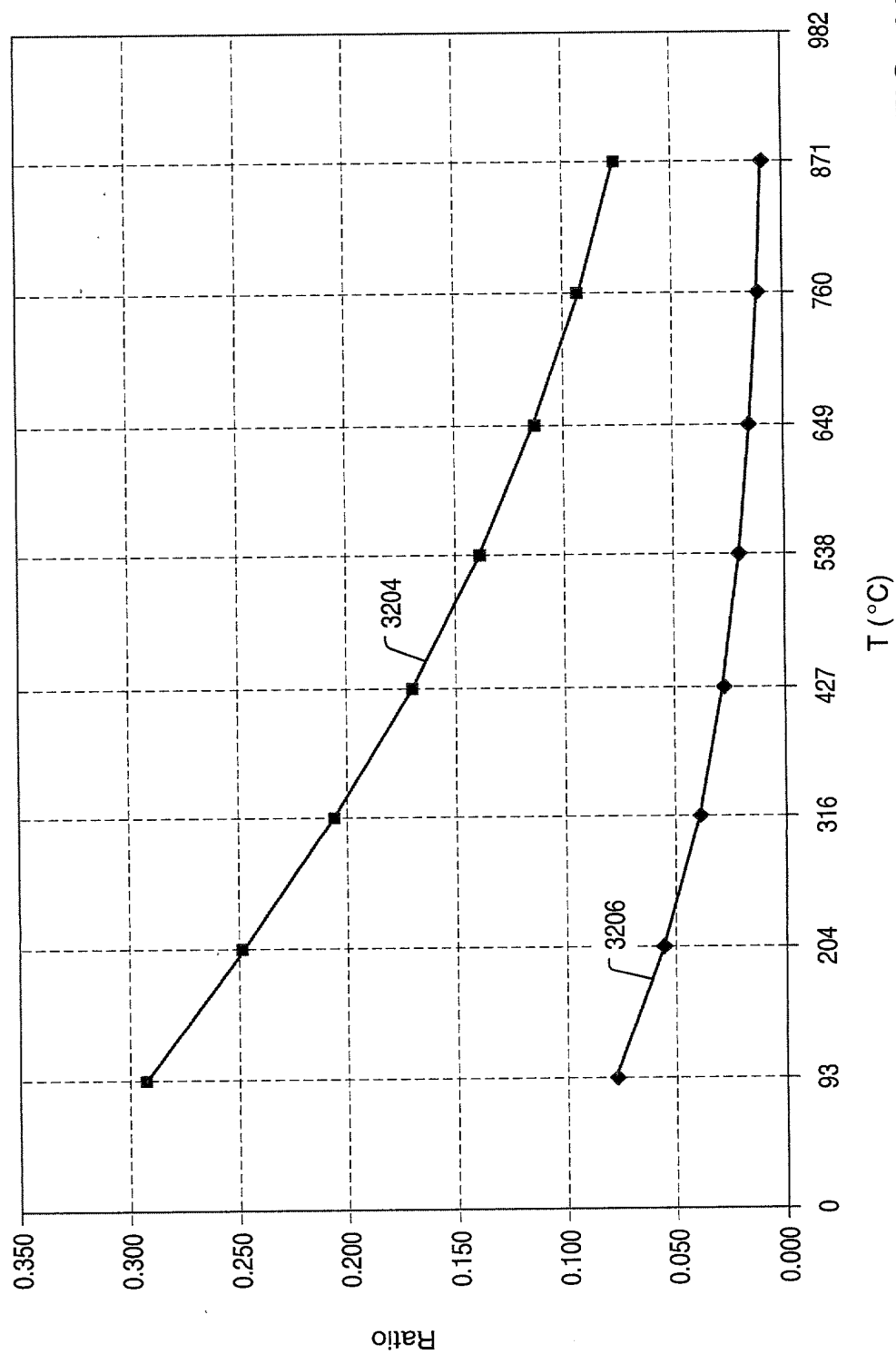


FIG. 83

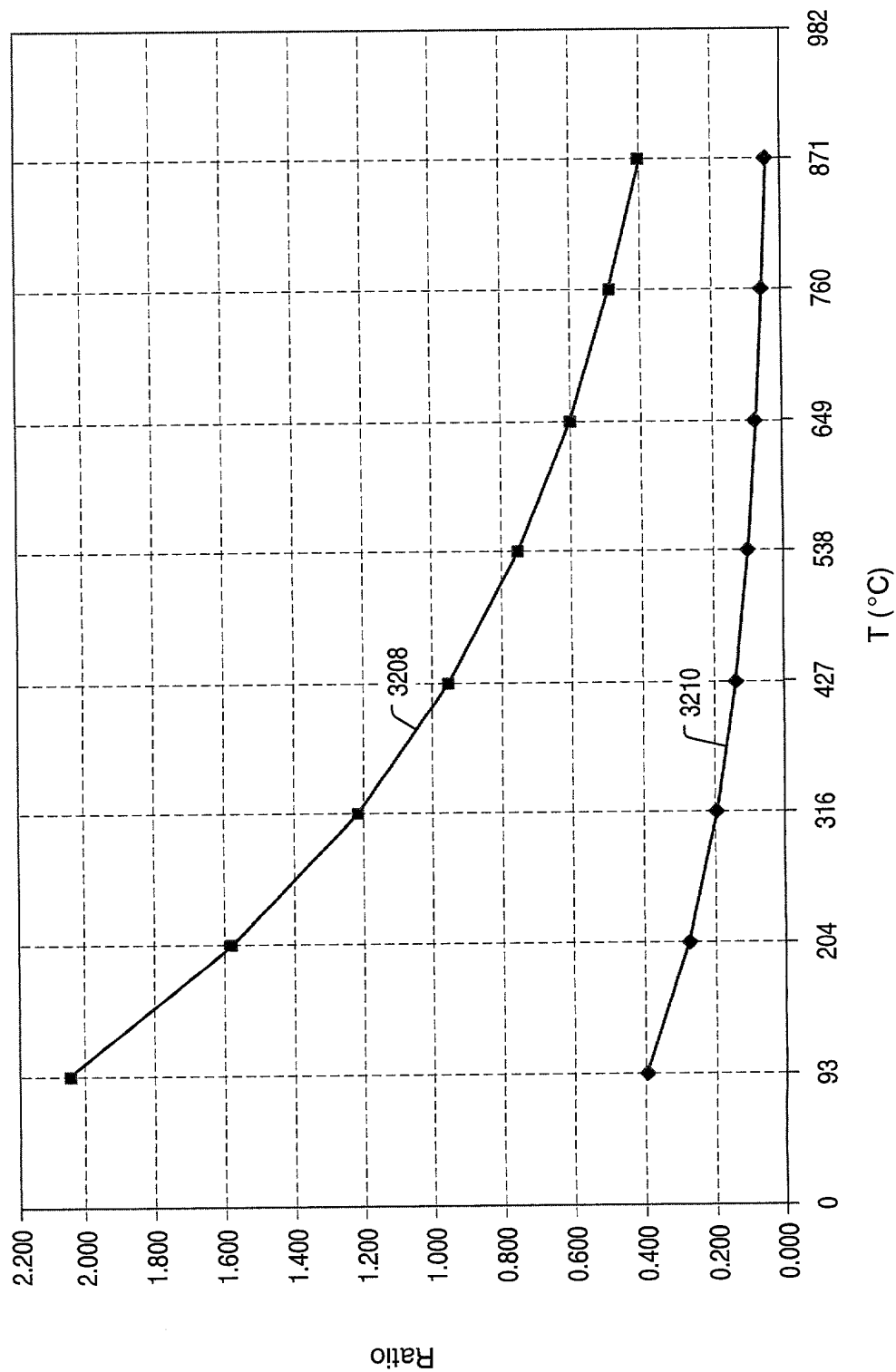


FIG. 84

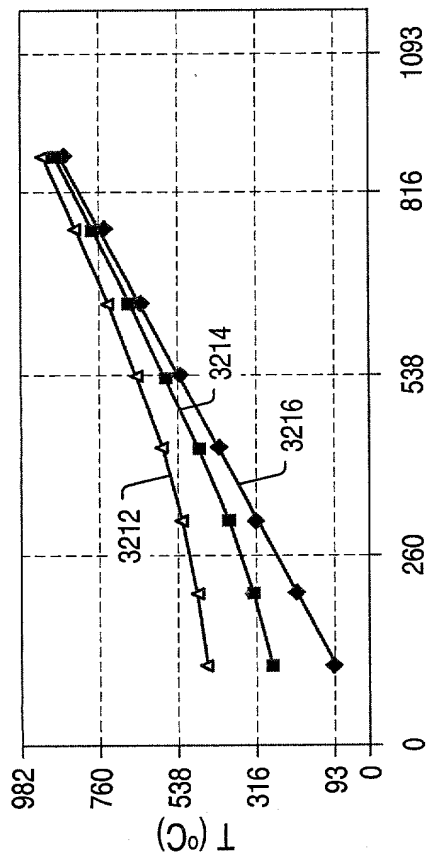


FIG. 85

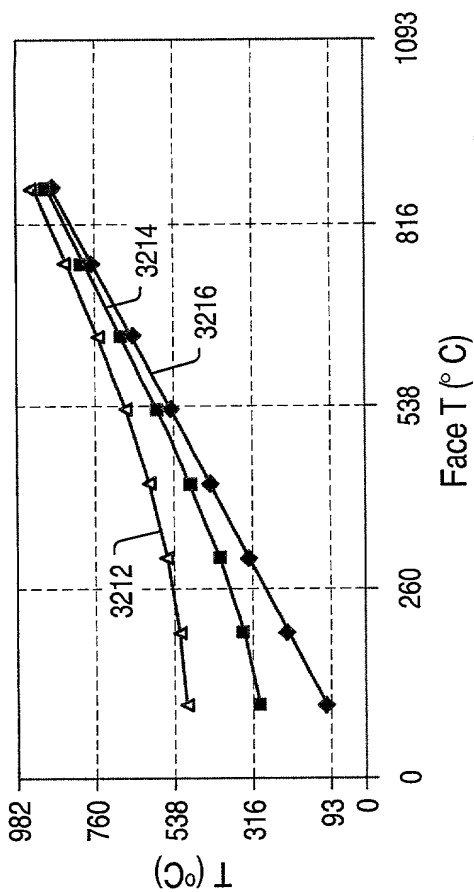


FIG. 86

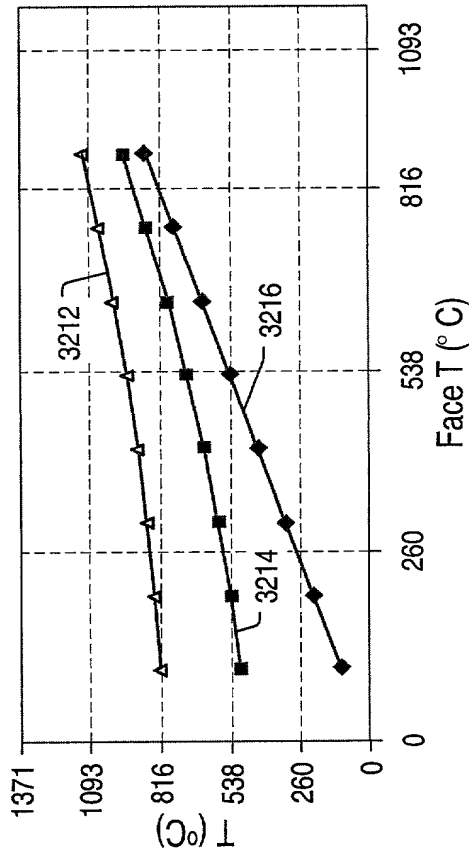


FIG. 87

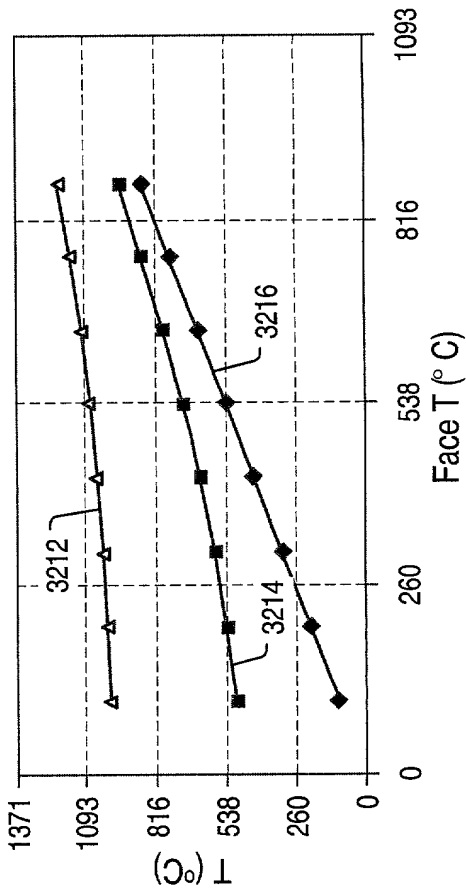


FIG. 88

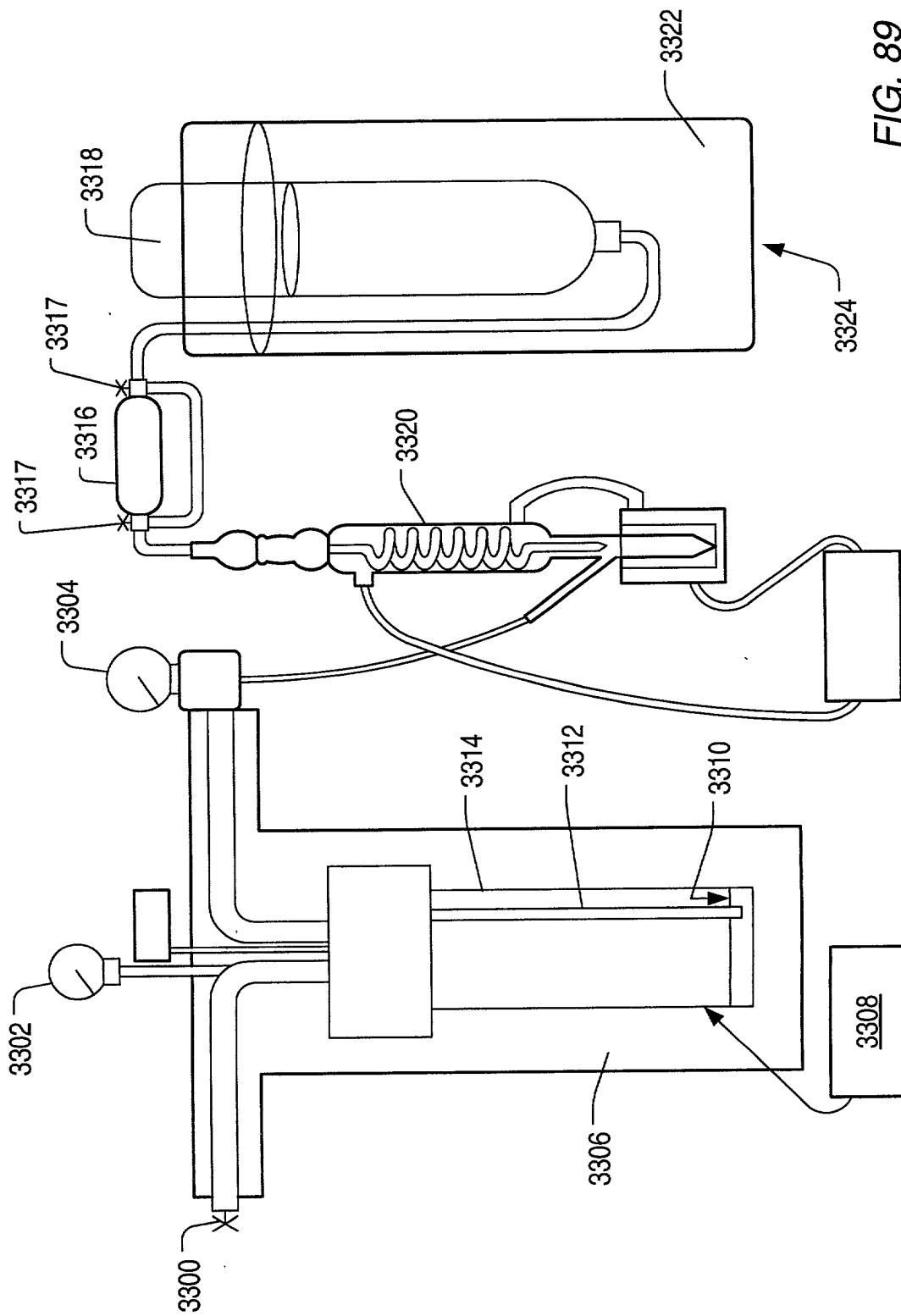


FIG. 89

FIG. 90

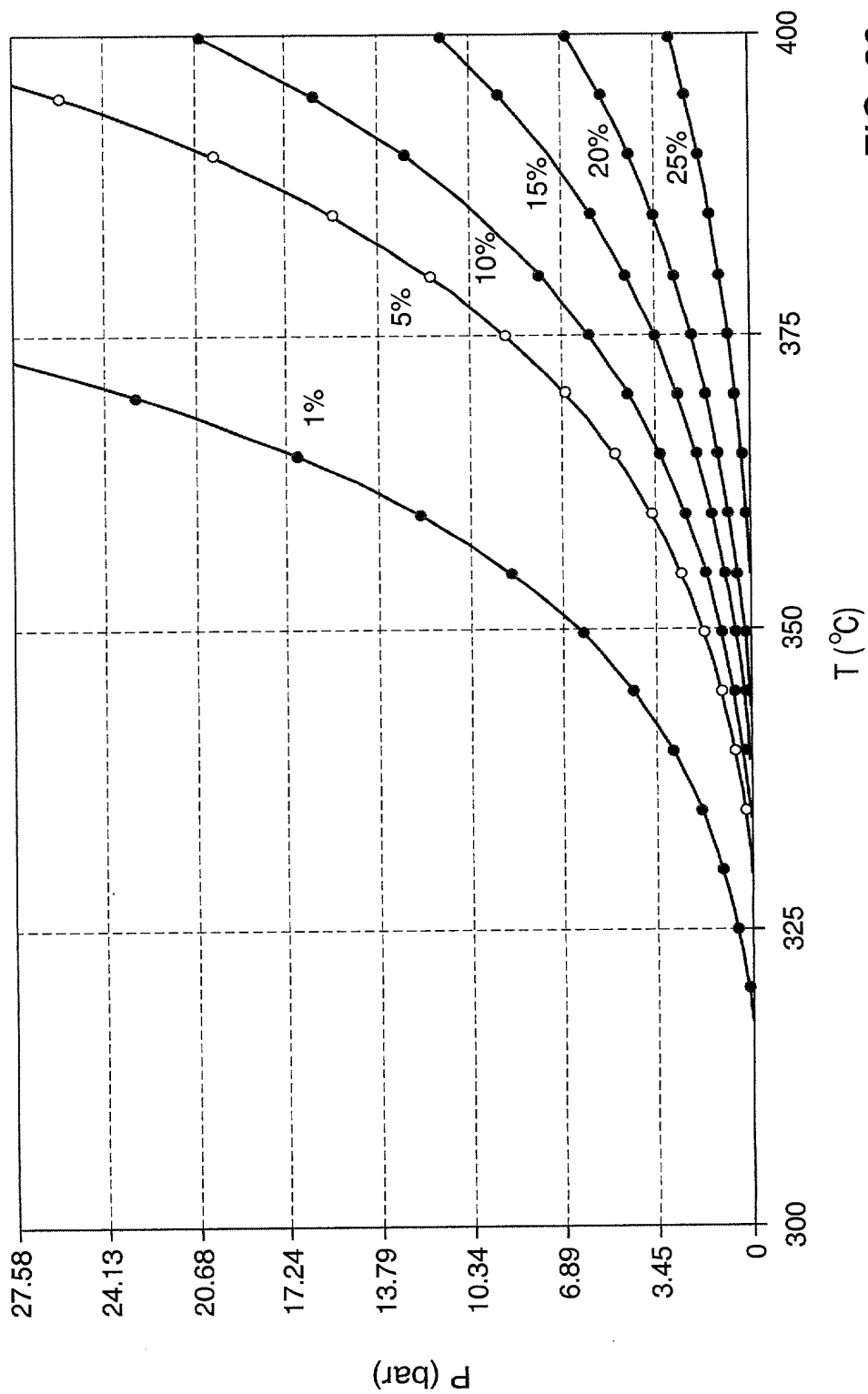


FIG. 90

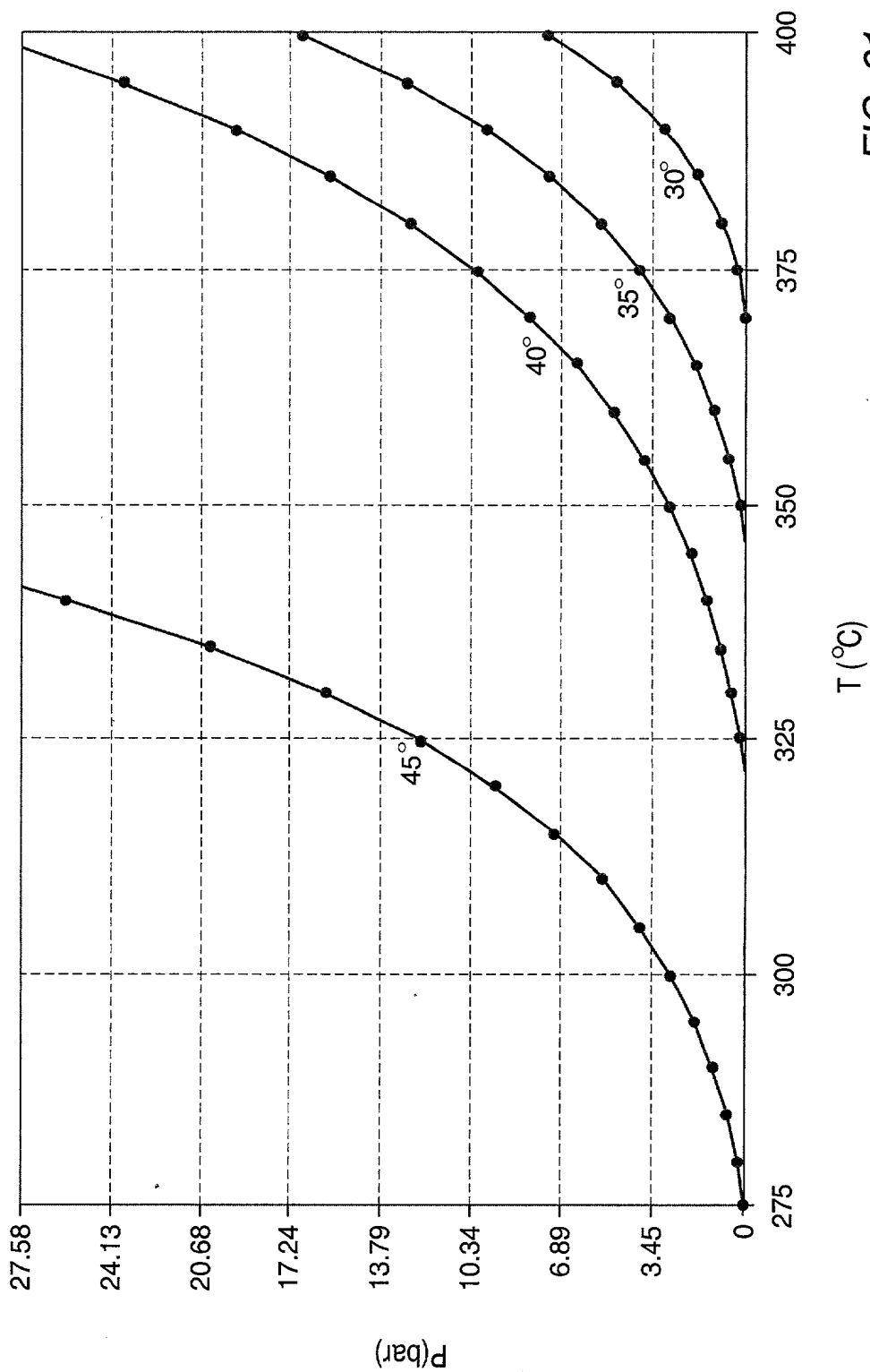


FIG. 91

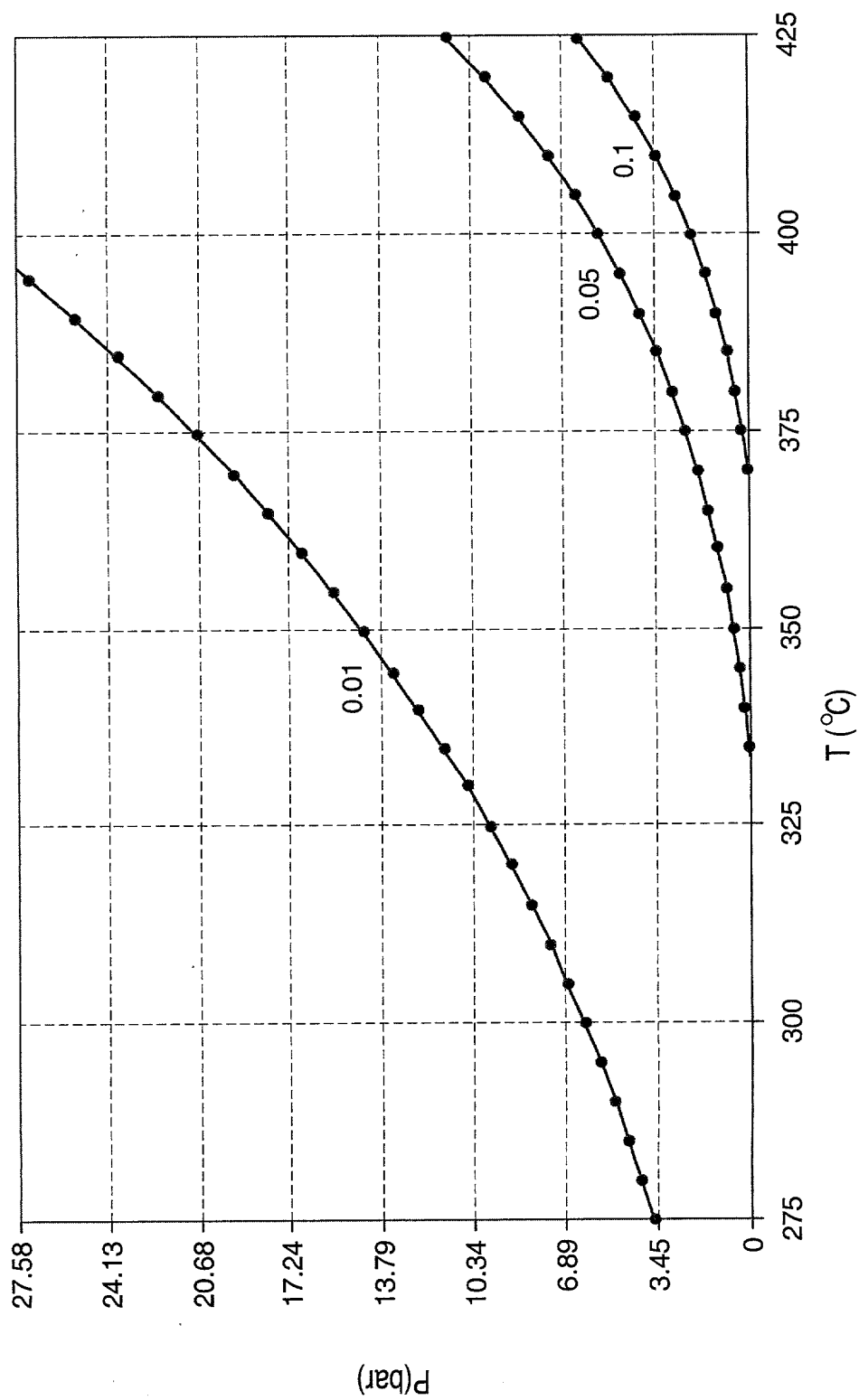


FIG. 92

FIG. 93

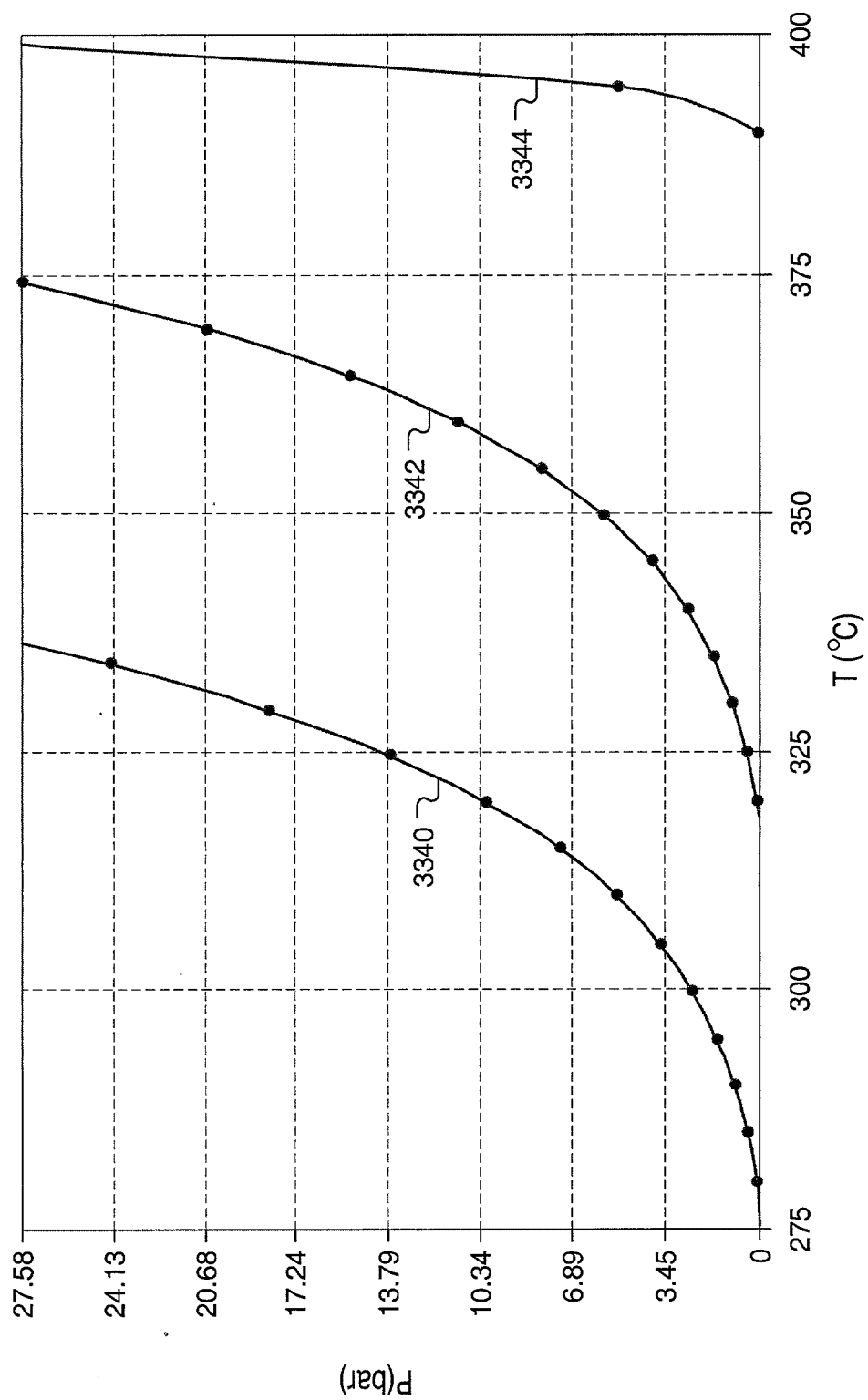


FIG. 93

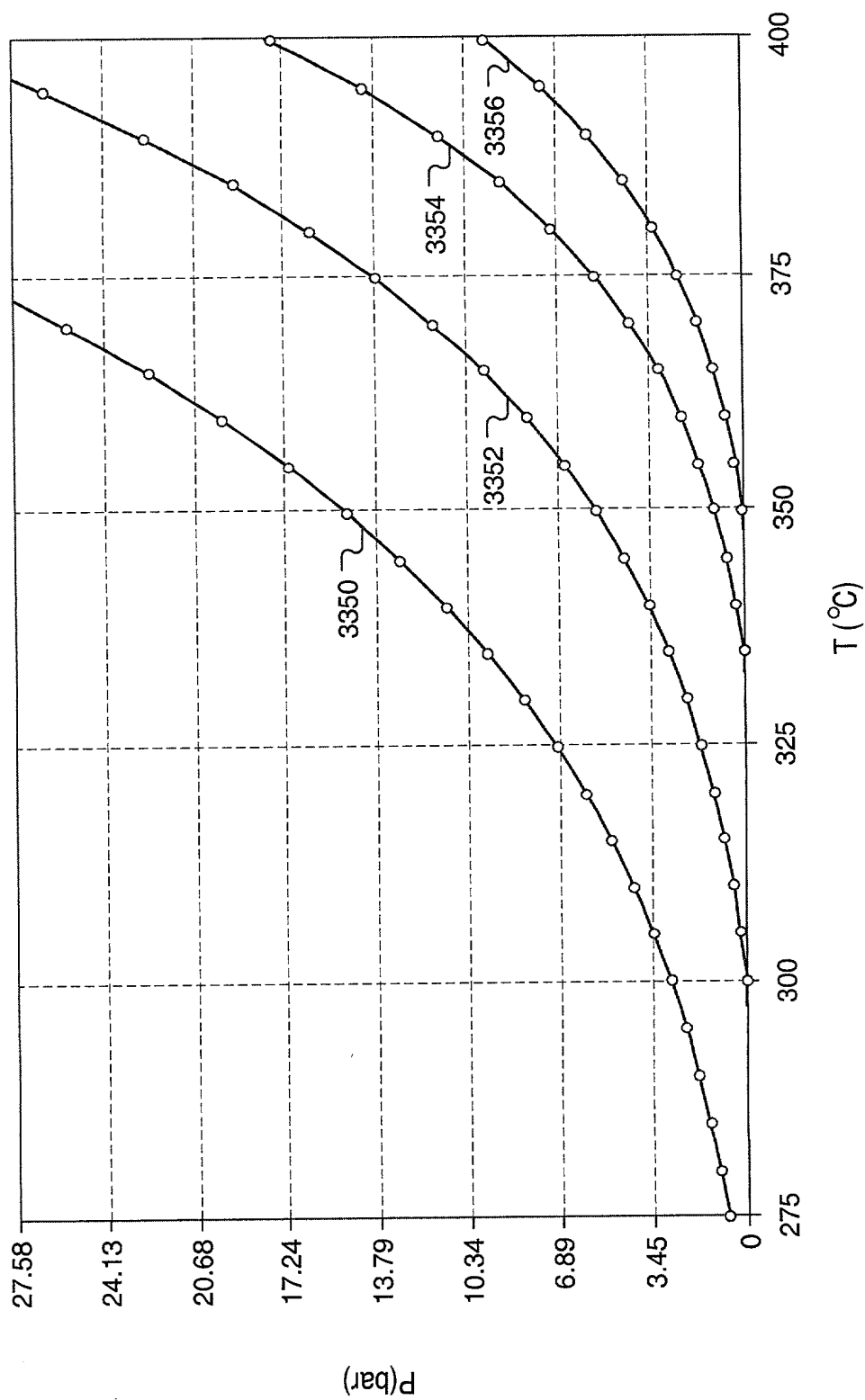


FIG. 94

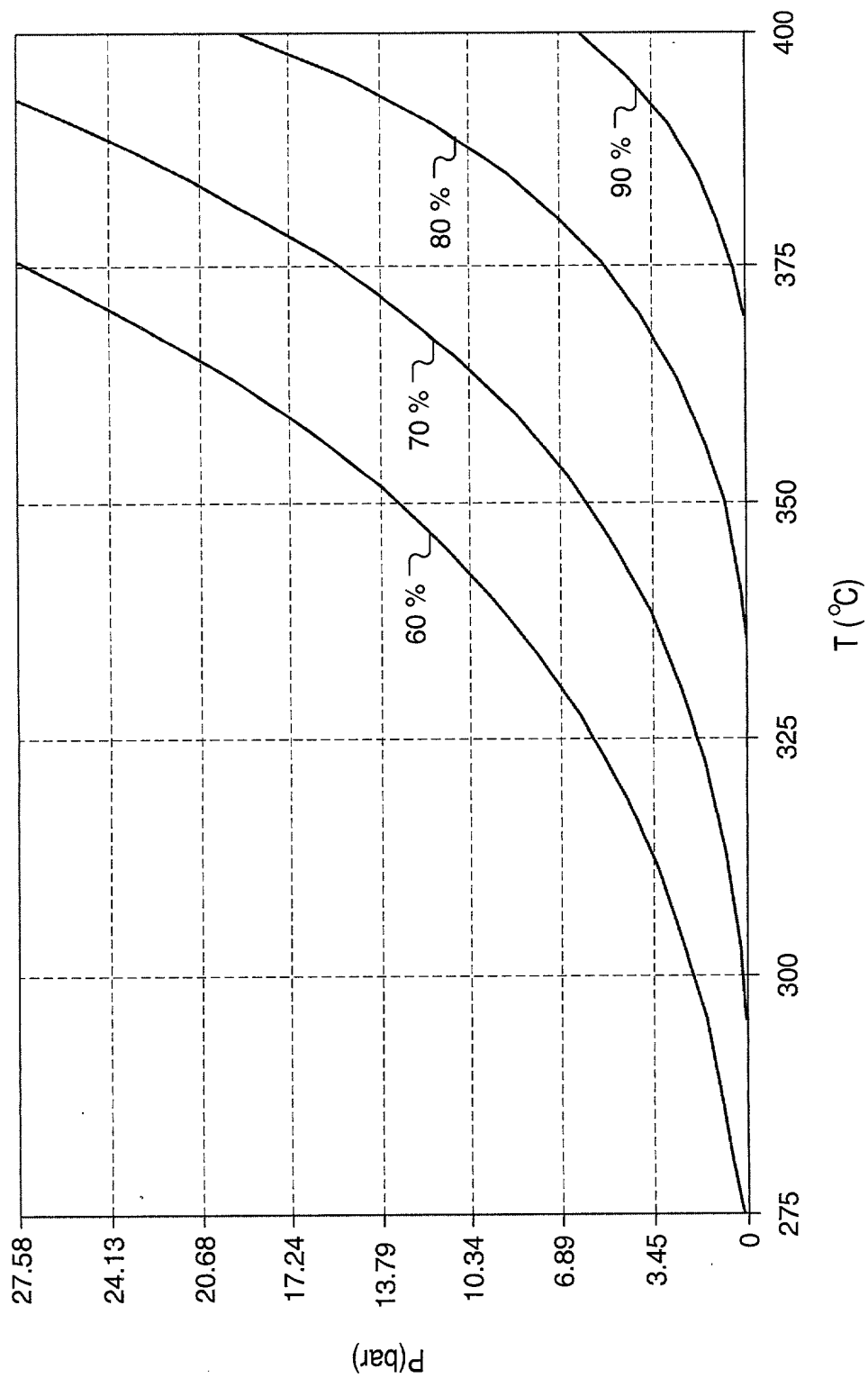


FIG. 95

FIG. 96 is a graph showing the relationship between pressure (P) in bar and temperature (T) in degrees Celsius for a system. The graph displays three curves labeled 1.8, 1.9, and 1.99, representing different states or compositions. The pressure ranges from 0 to 27.58 bar, and the temperature ranges from 275 to 400 degrees Celsius.

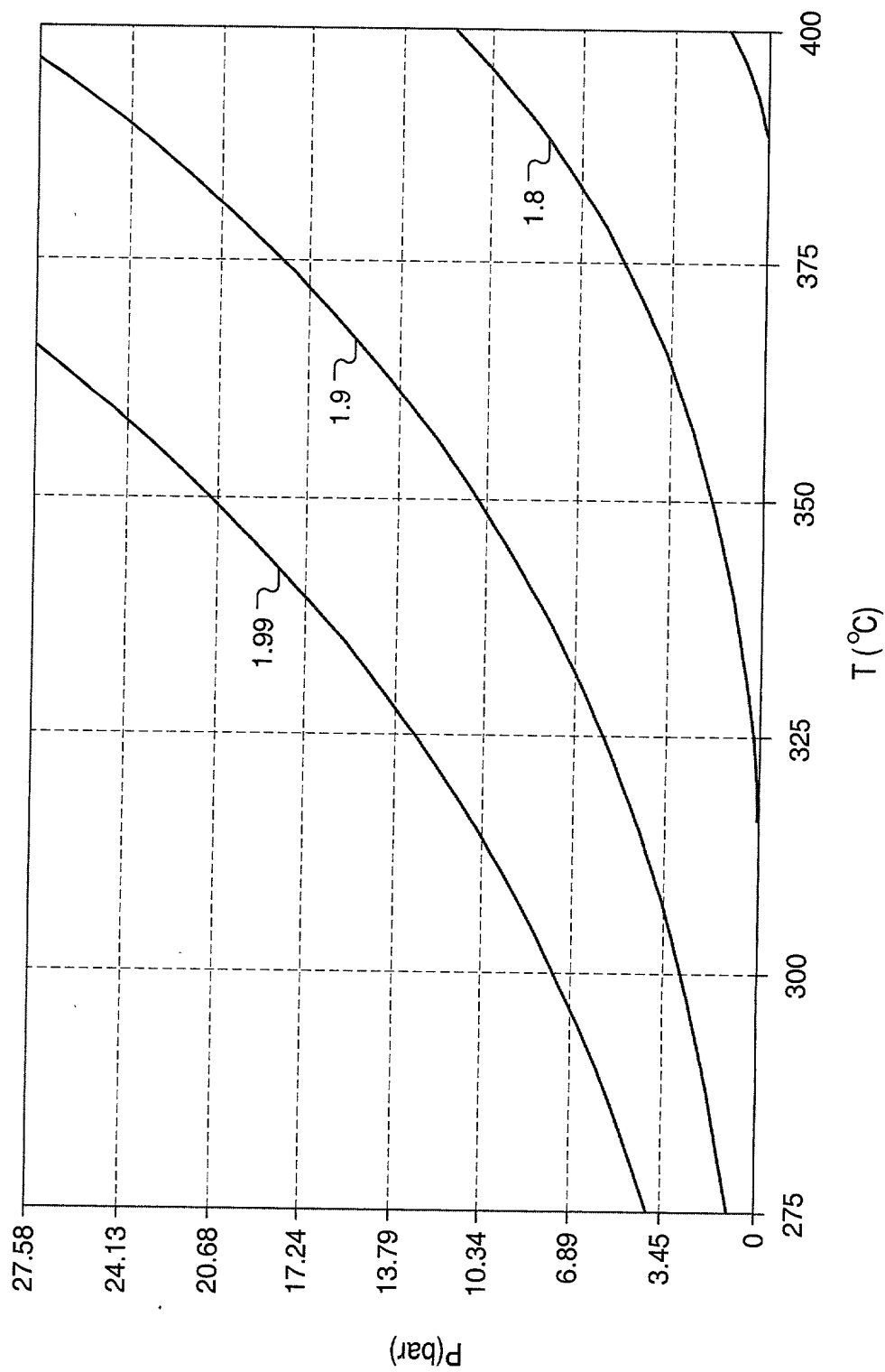


FIG. 96

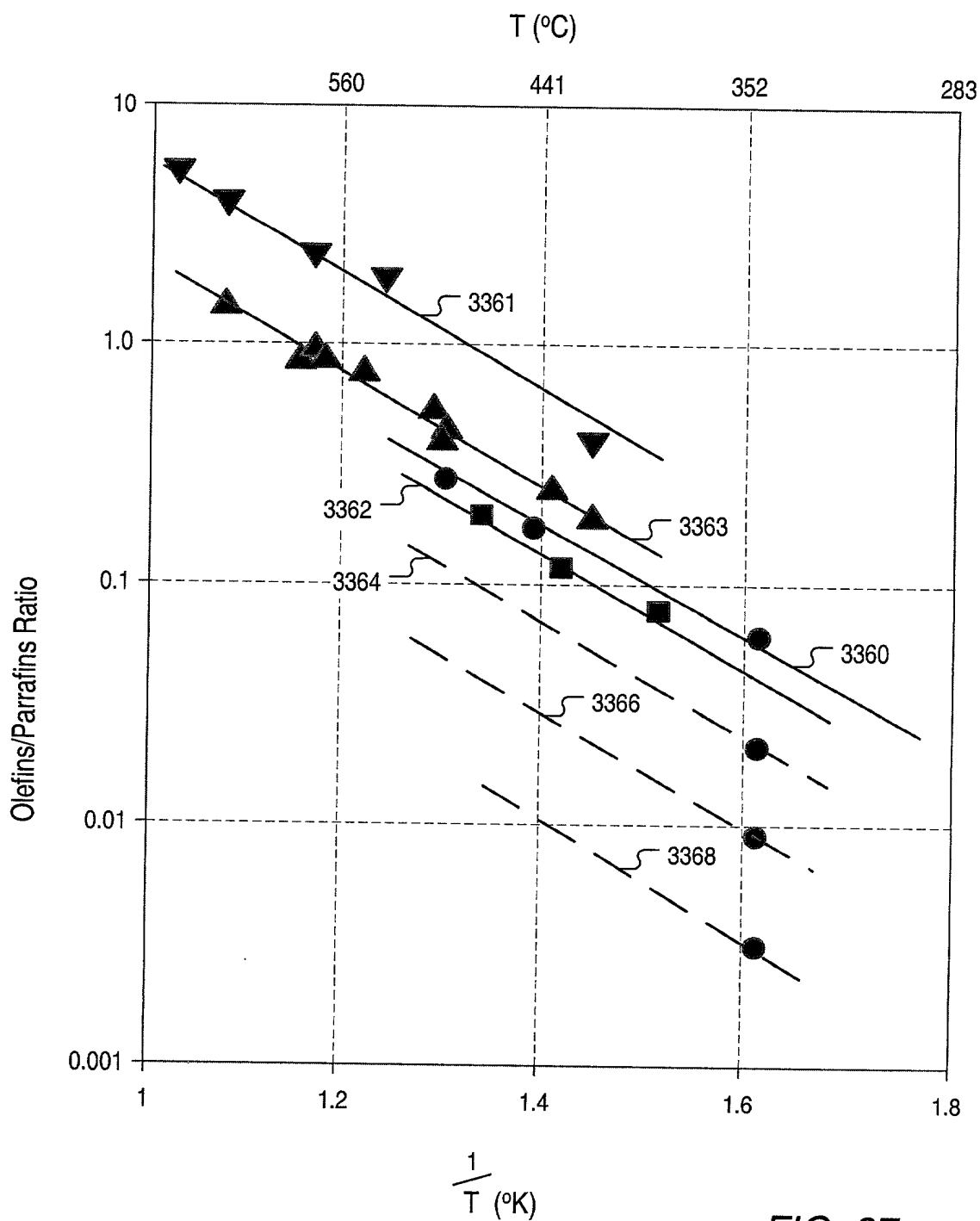


FIG. 97

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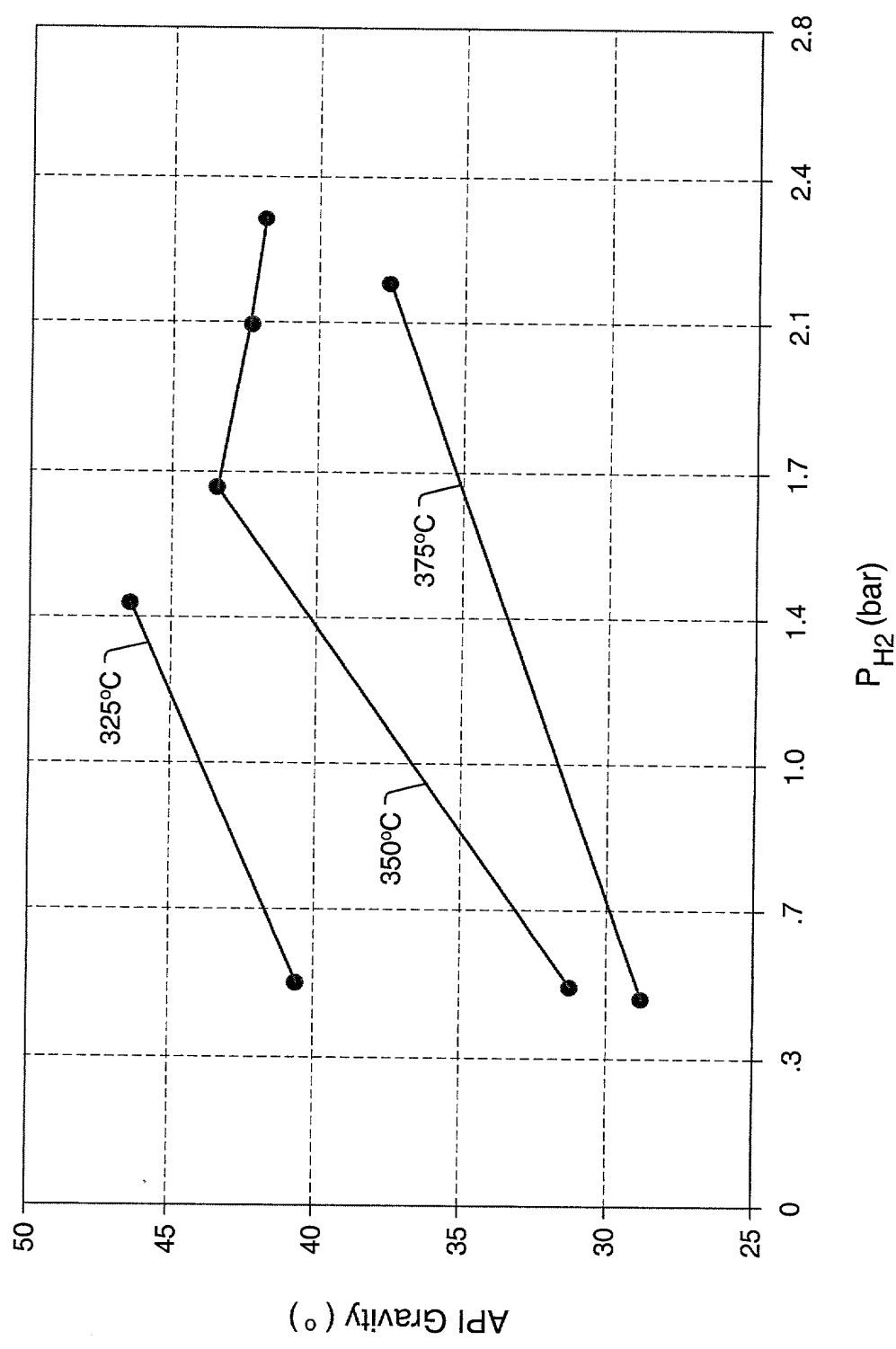


FIG. 98

Downloaded from https://www.cambridge.org/core. University of Cambridge, on 02 Jun 2018 at 14:02:00, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781315335430.008

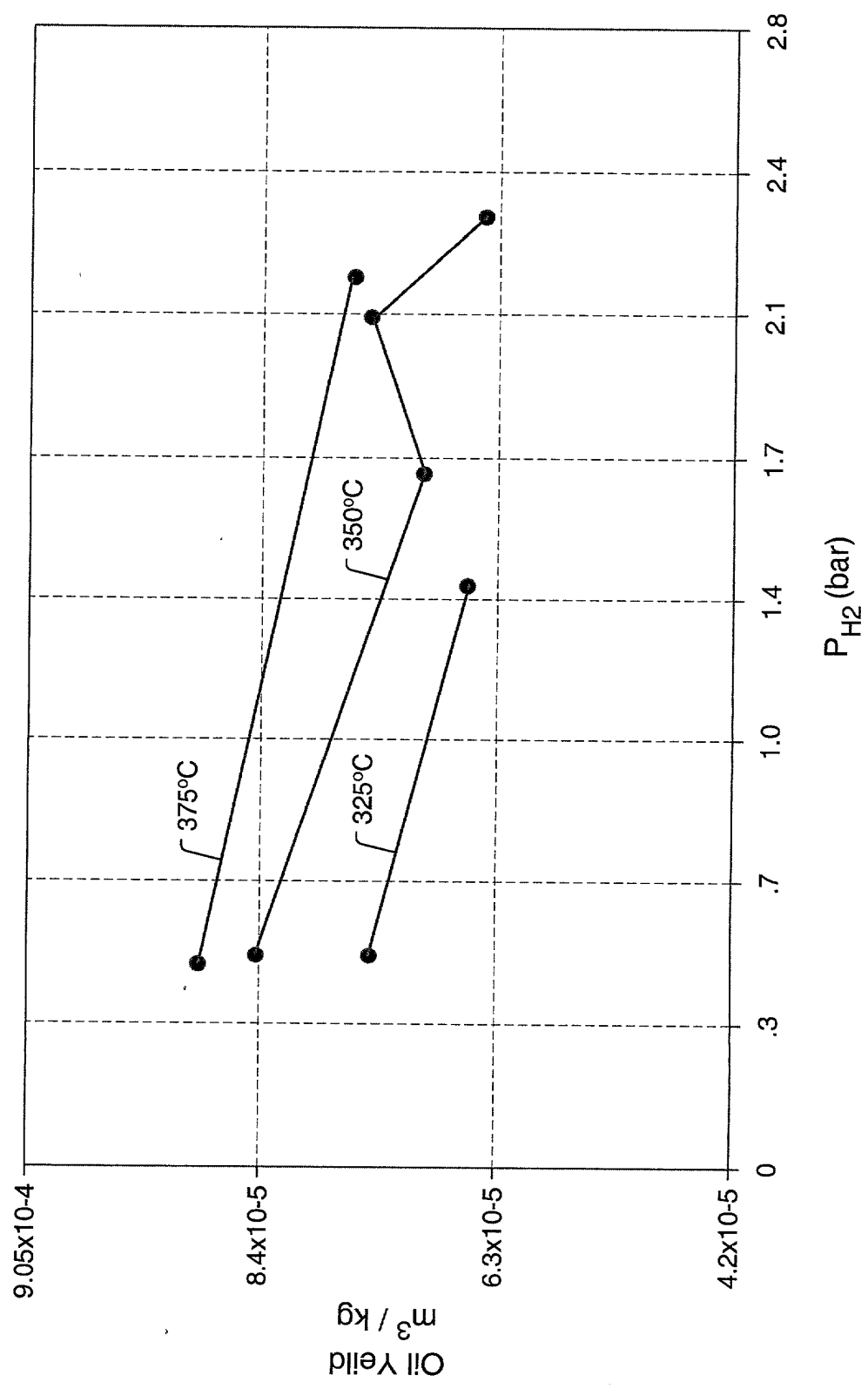


FIG. 99

FIG. 100

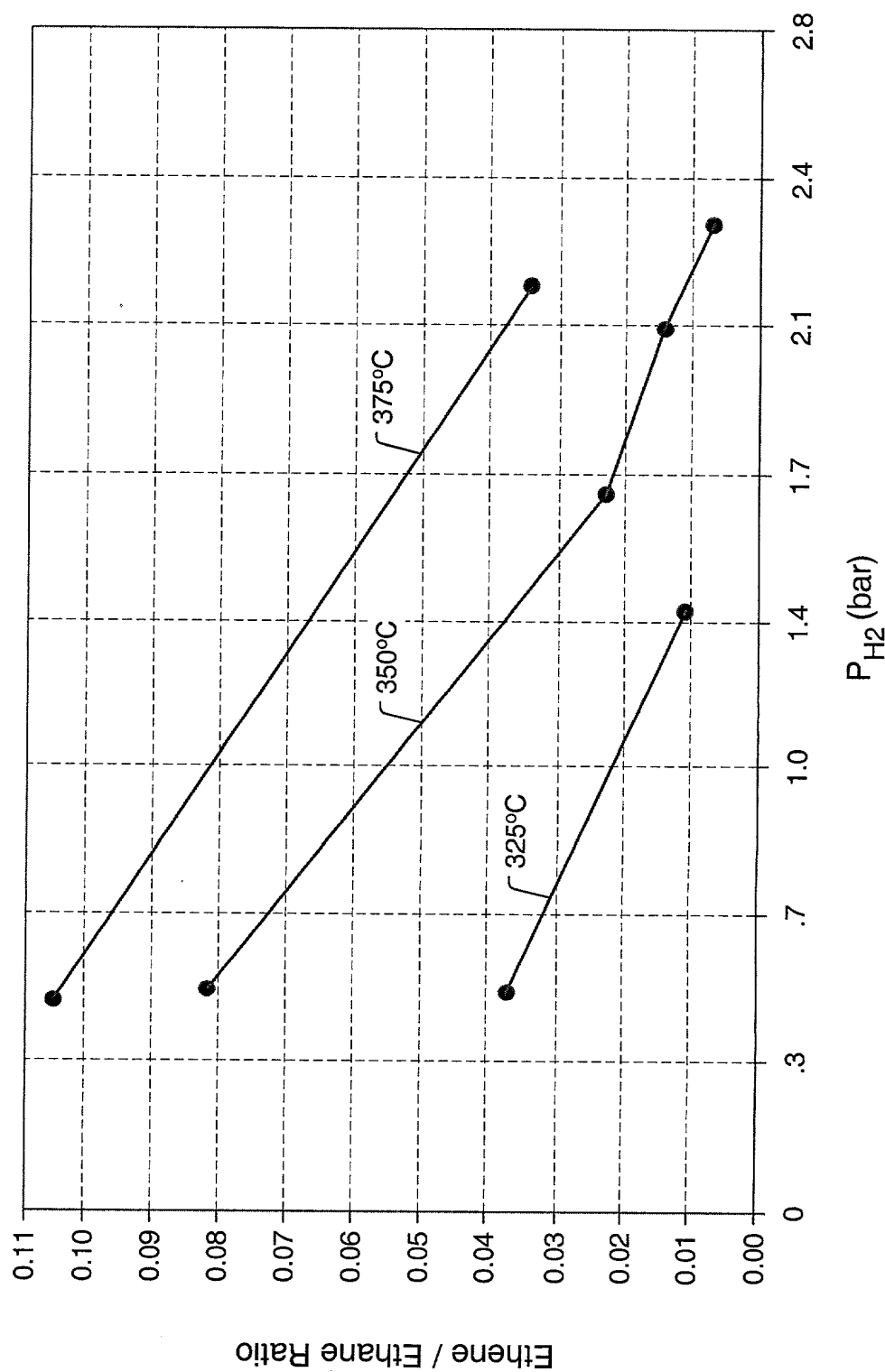


FIG. 100

FIG. 101 is a graph showing the relationship between the ratio of oxygen to hydrogen (O/H) and the partial pressure of hydrogen (P_{H2}) in bar for three different temperatures: 325°C, 350°C, and 375°C. The graph shows that as the partial pressure of hydrogen increases, the O/H ratio also increases for all three temperatures. The O/H ratio is highest at 325°C and lowest at 375°C for a given partial pressure of hydrogen.

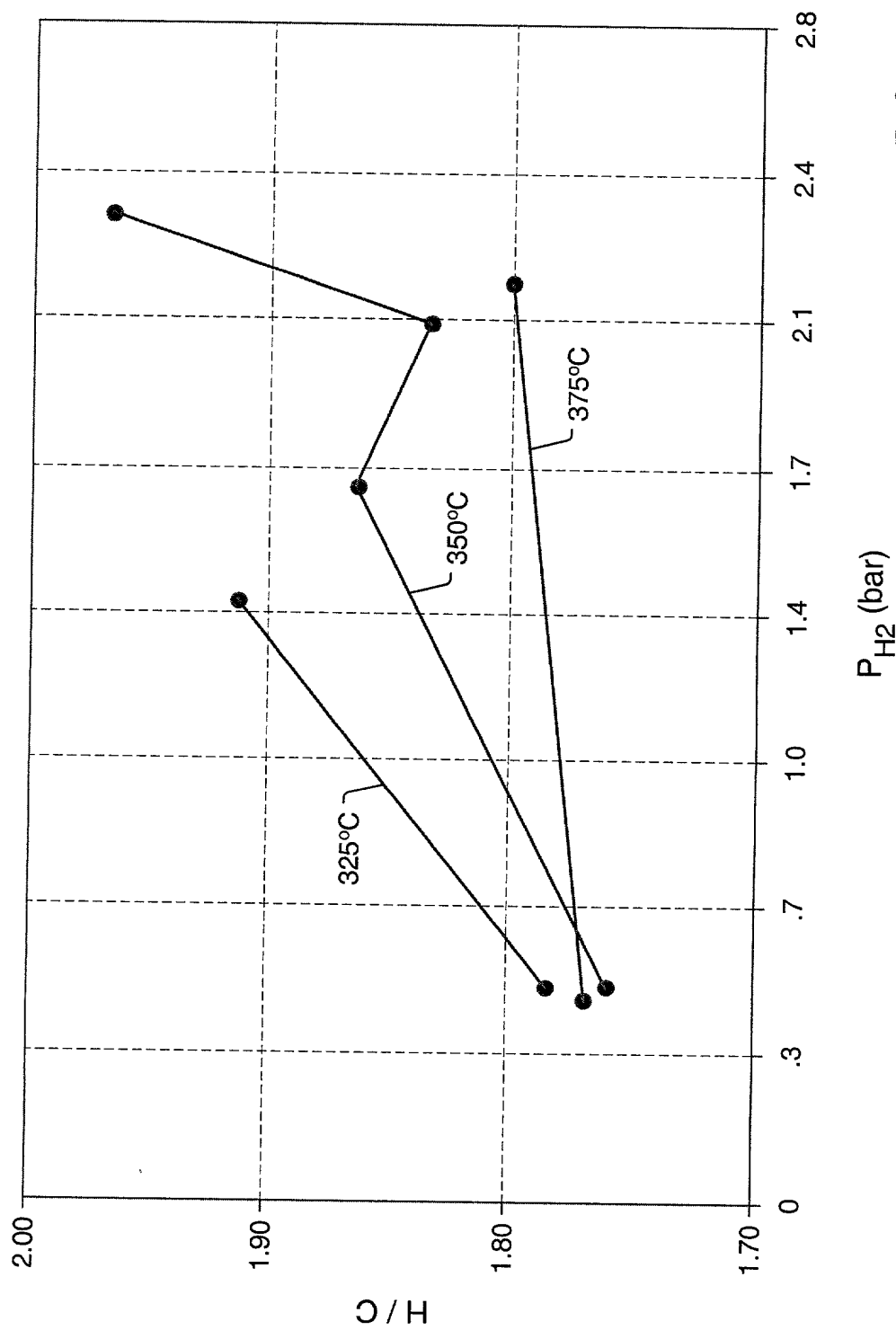


FIG. 101

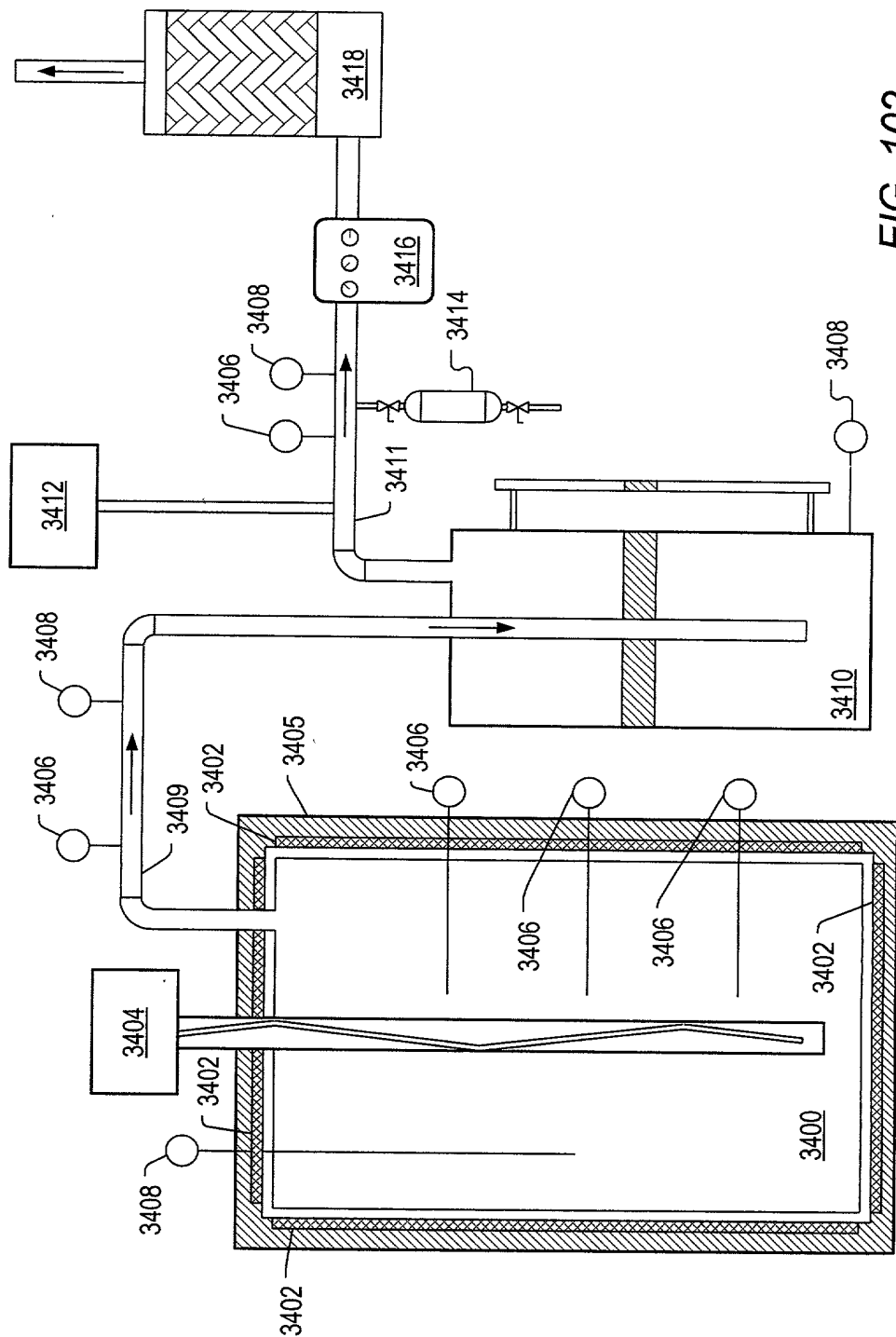


FIG. 102

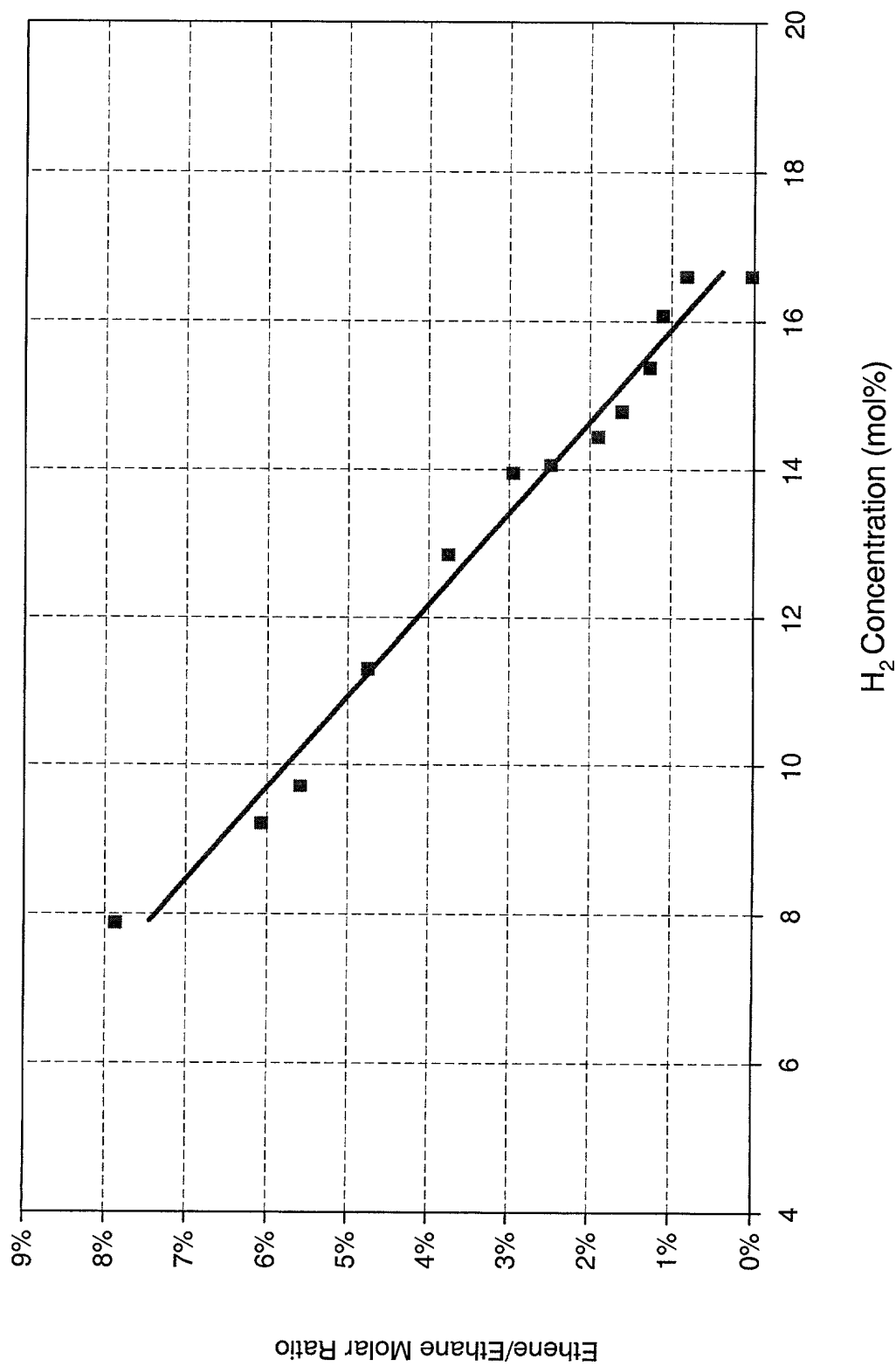
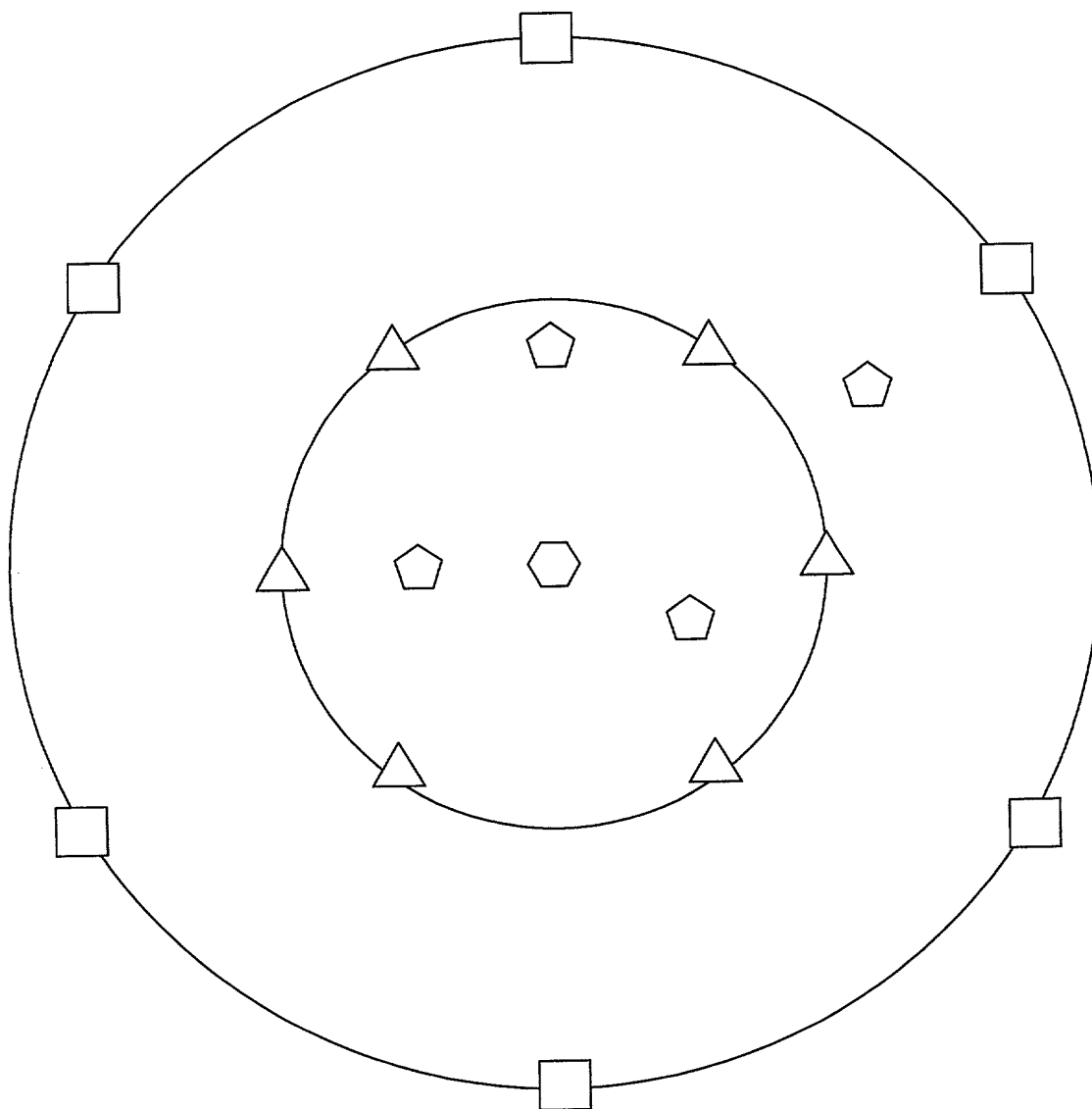


FIG. 103



△ - 3600

⬠ - 3603

□ - 3604

⬡ - 3602

FIG. 104

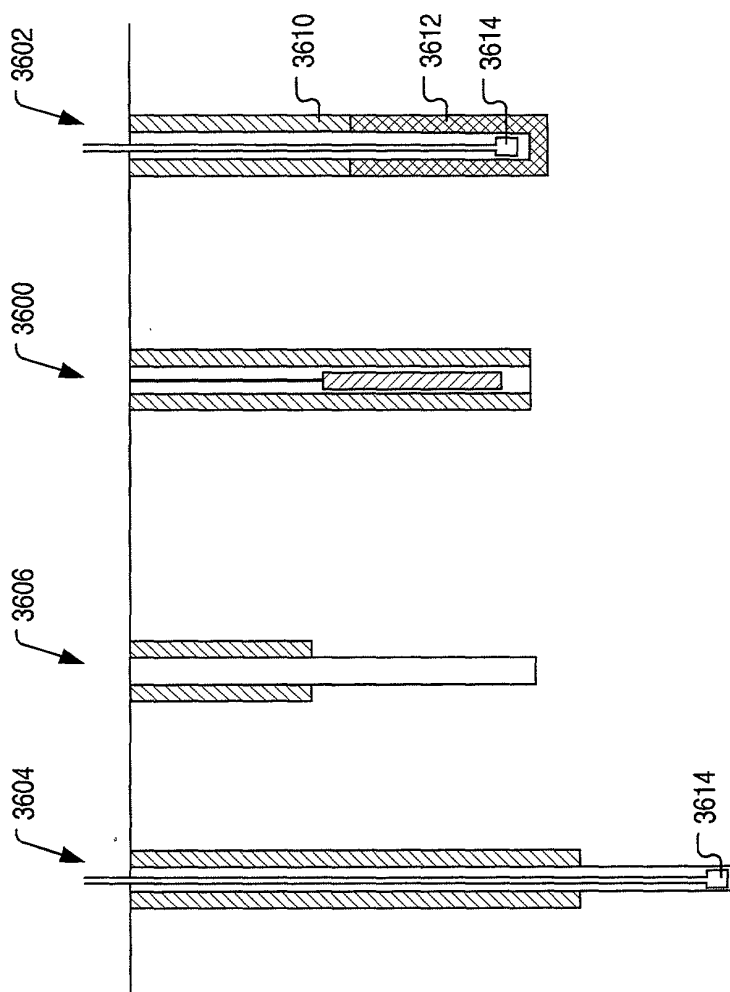


FIG. 105

FIG. 106

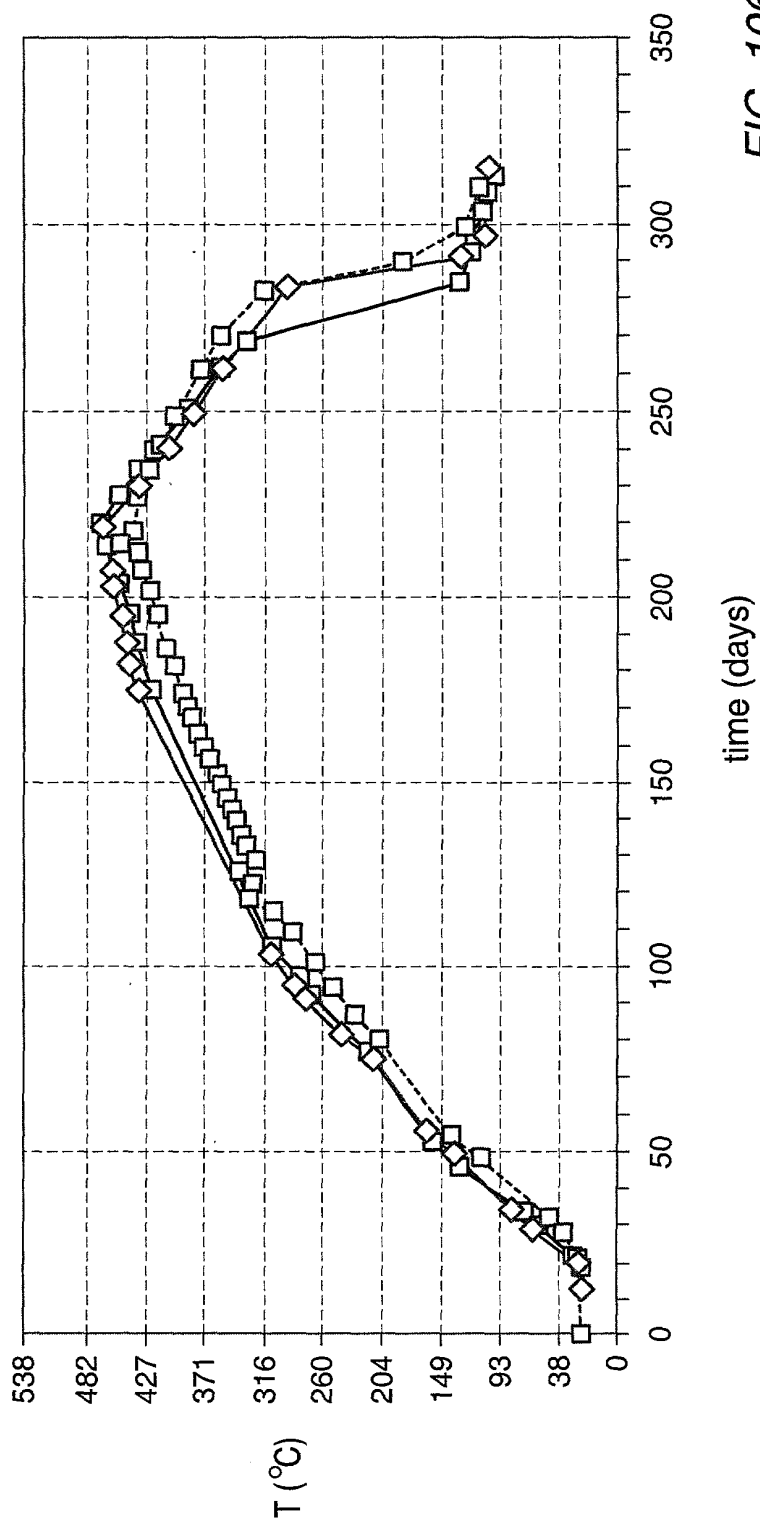


FIG. 106

FIG. 107

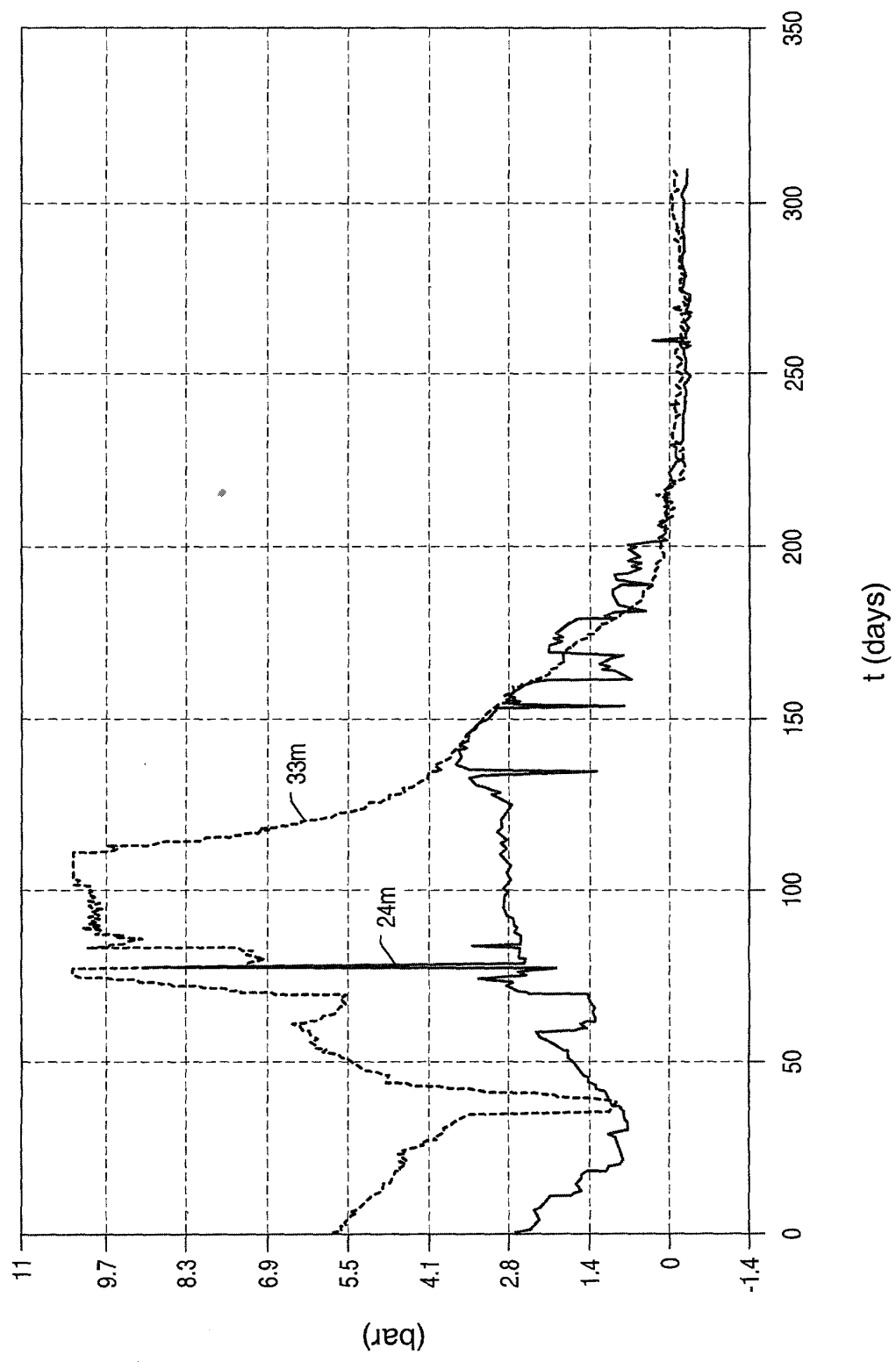


FIG. 107

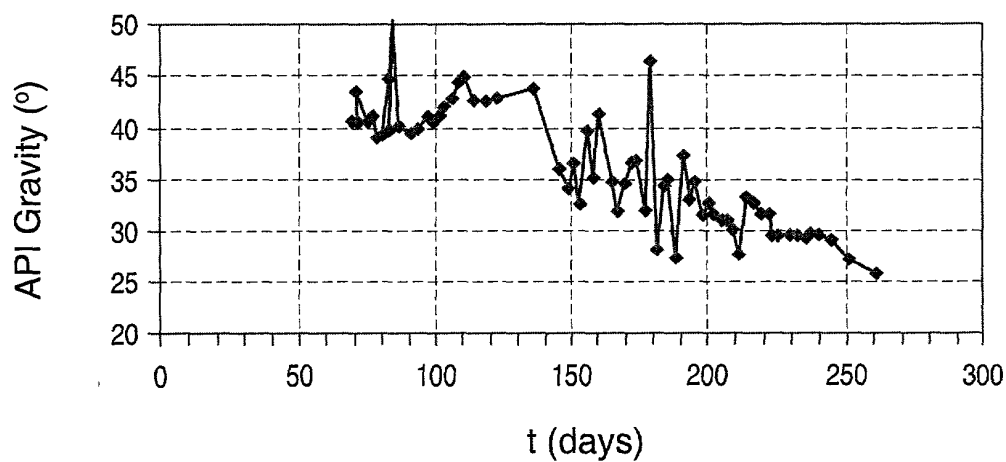


FIG. 108

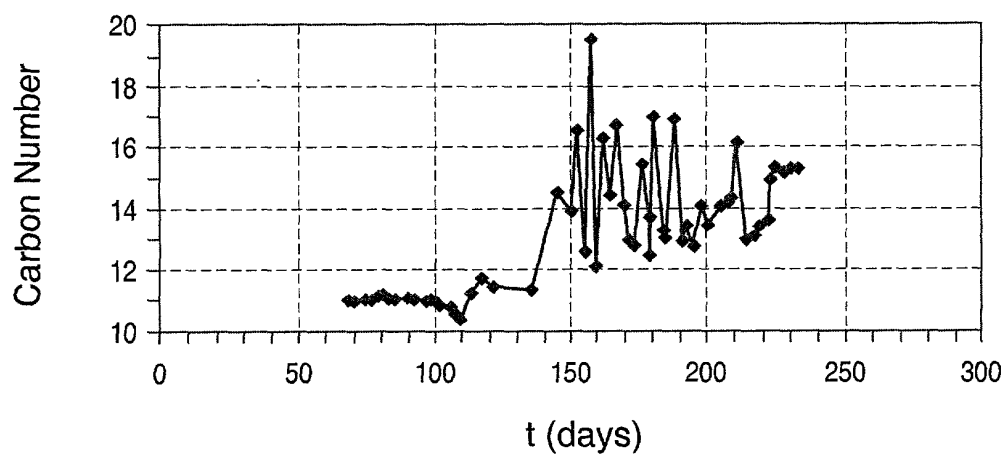


FIG. 109

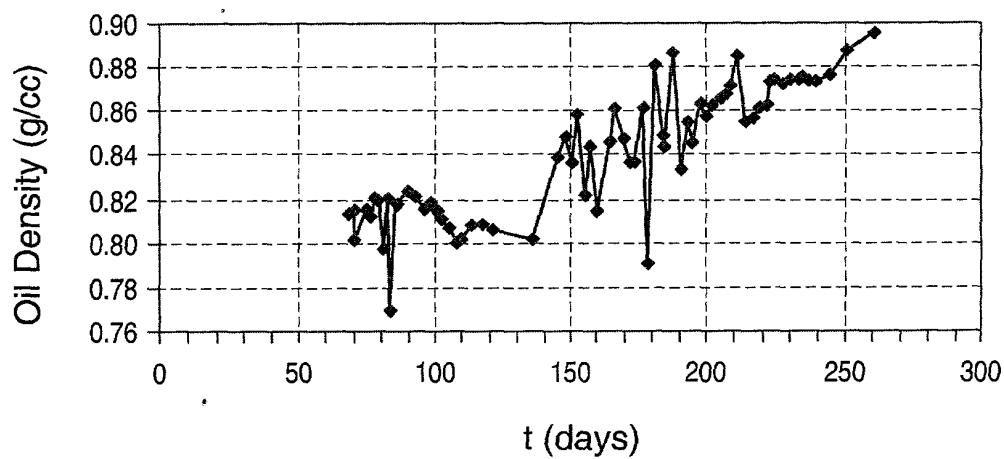


FIG. 110

1000 100 10 1 0.1
 100 10 1 0.1
 10 1 0.1
 1 0.1
 0.1

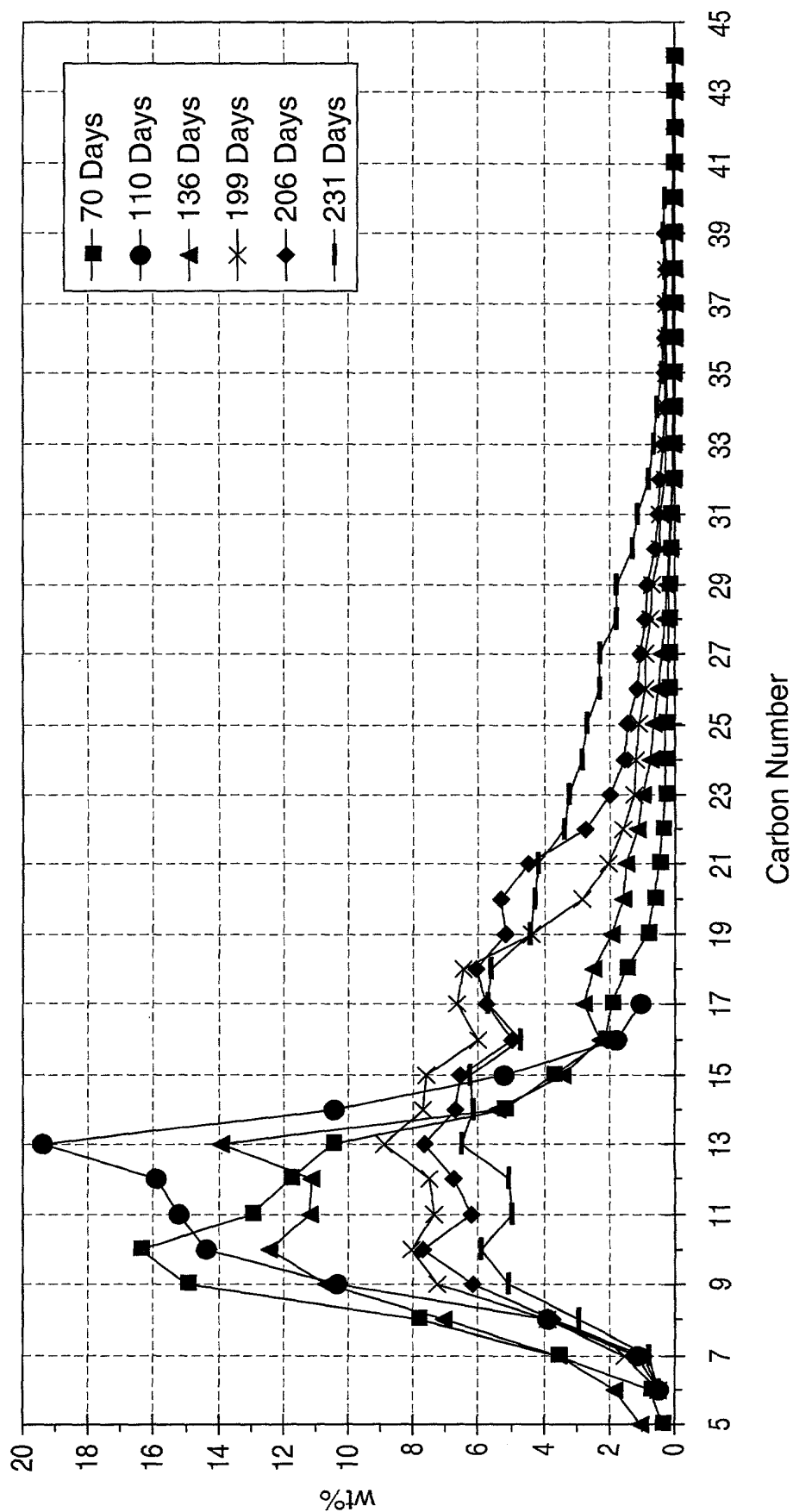


FIG. 111

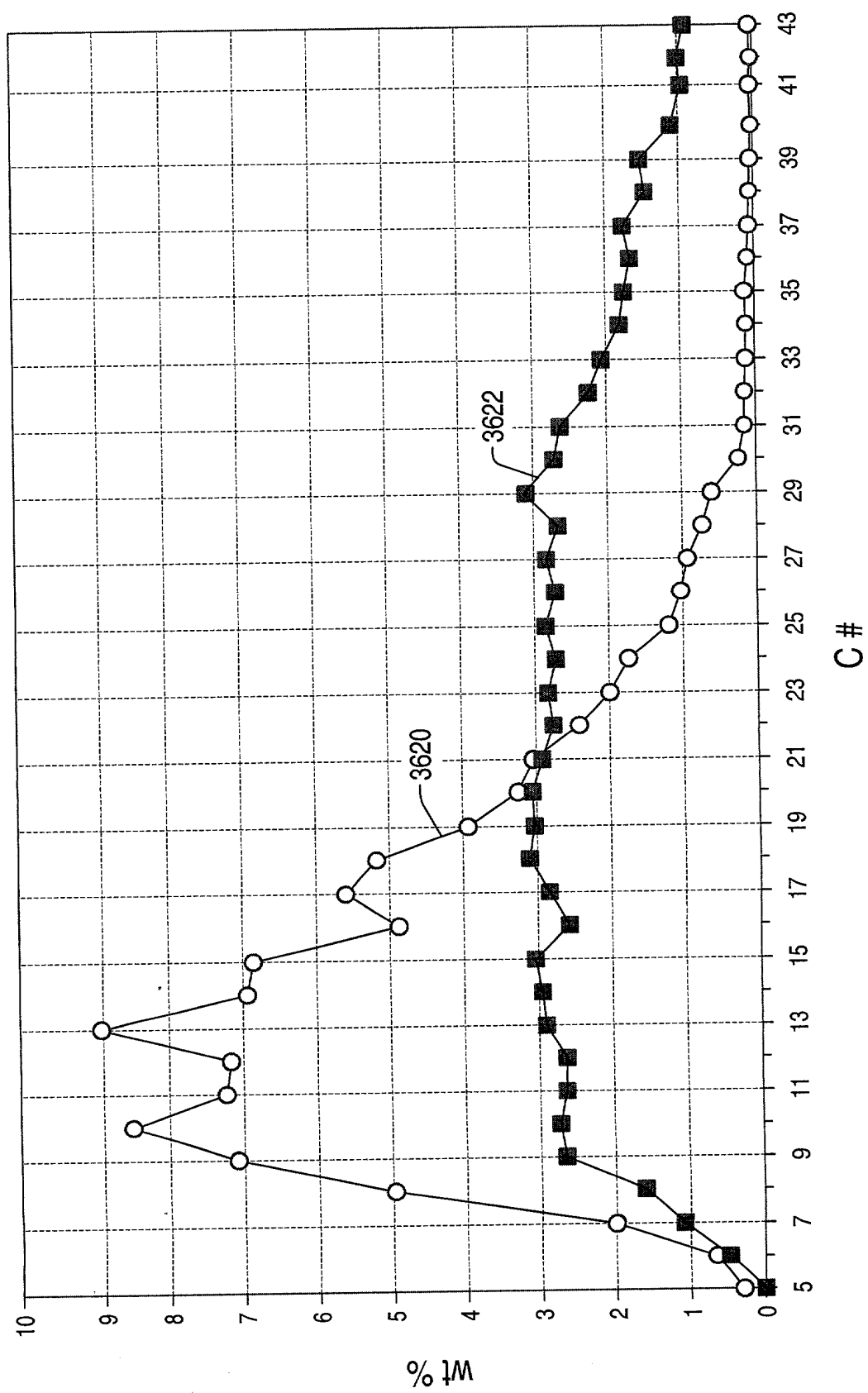


FIG. 112

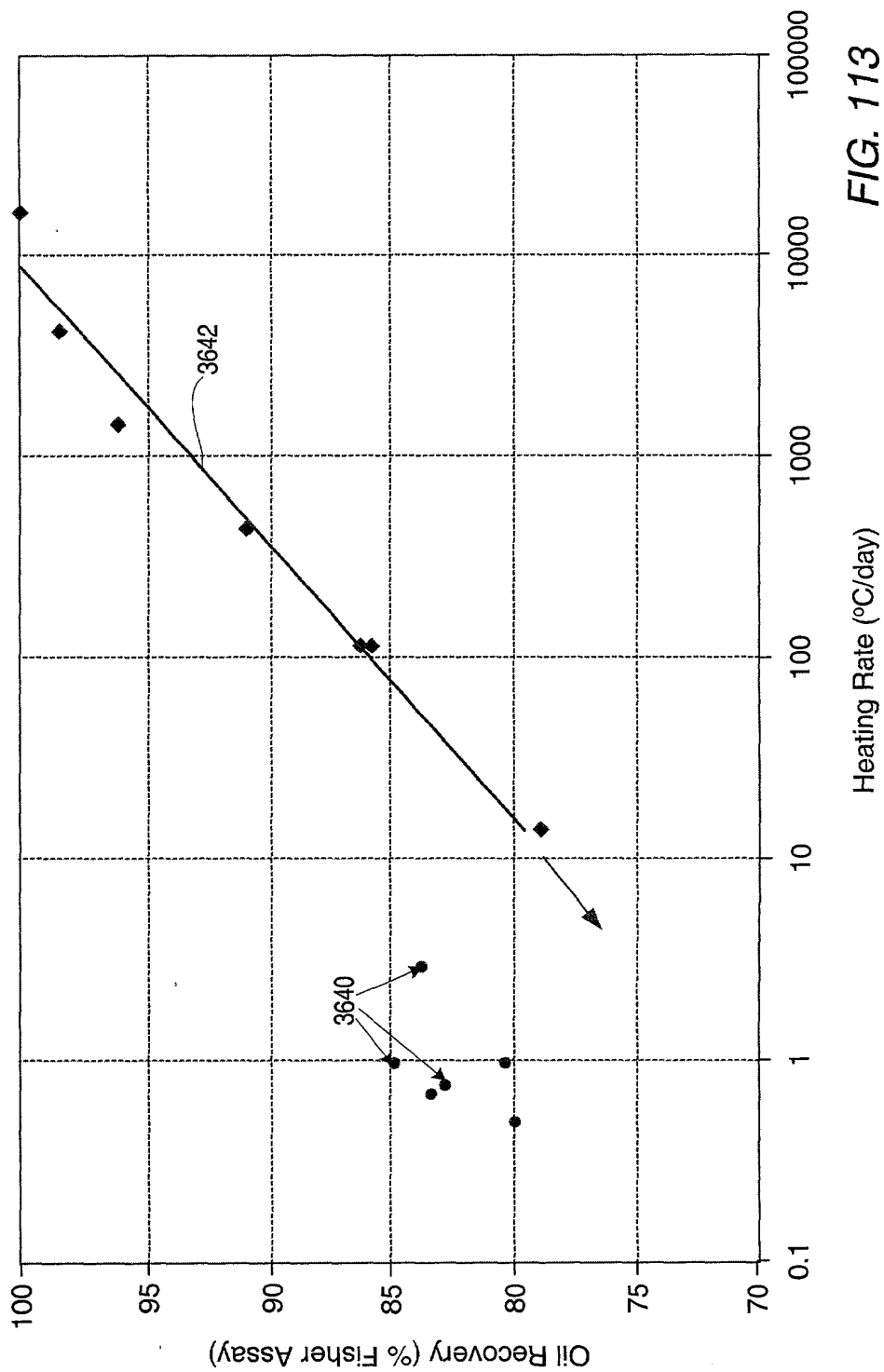


FIG. 113

FIG. 114 is a graph showing the oil production rate (bbls/day) versus time (days) for two wells, 3670 and 3674. The y-axis represents the oil production rate in bbls/day, ranging from 0 to 10. The x-axis represents time in days, ranging from 0 to 100. Well 3670 (solid line) shows a peak production rate of approximately 9.5 bbls/day around day 50. Well 3674 (dashed line) shows a peak production rate of approximately 2.5 bbls/day around day 20. The area under the dashed line is shaded with diagonal lines.

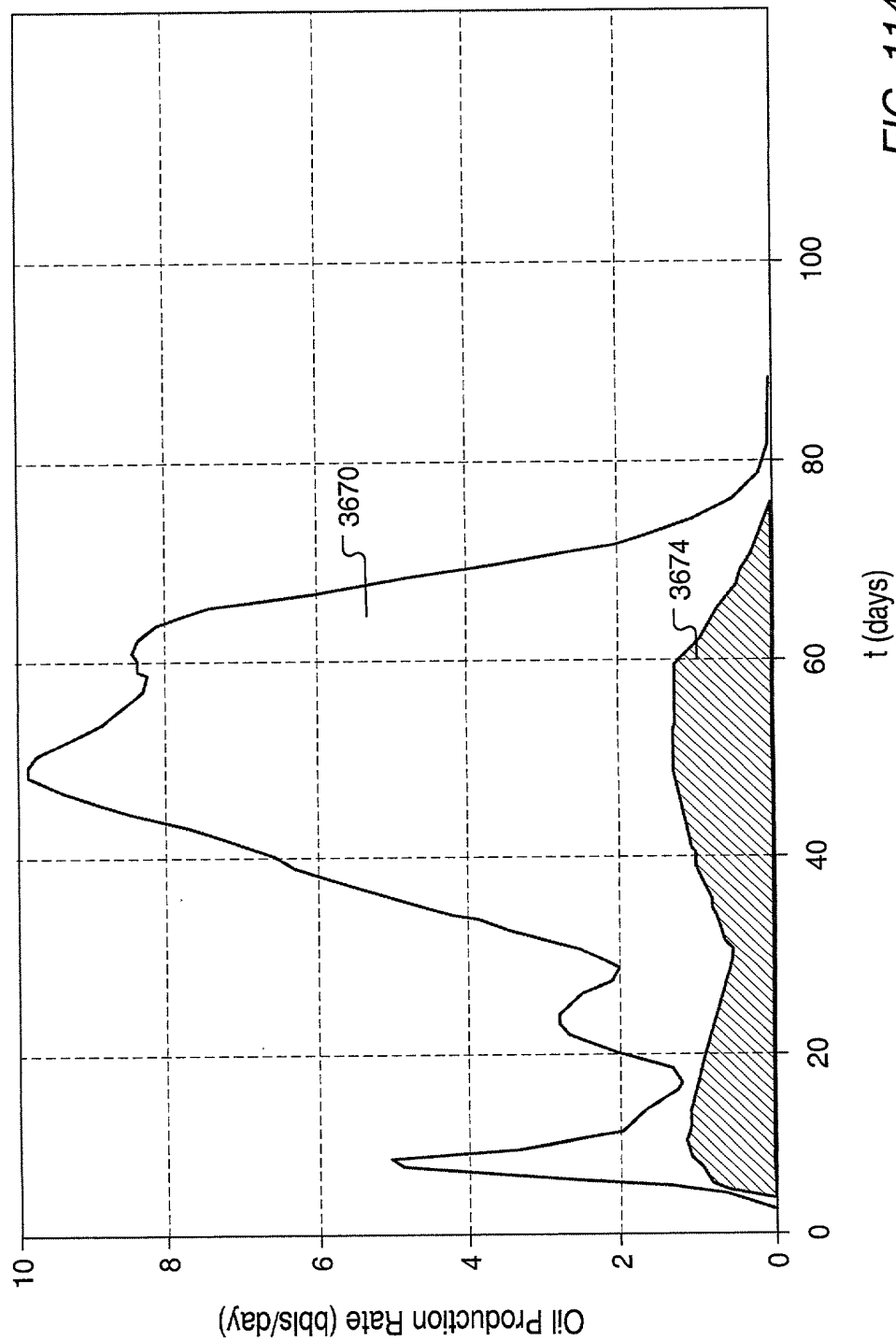
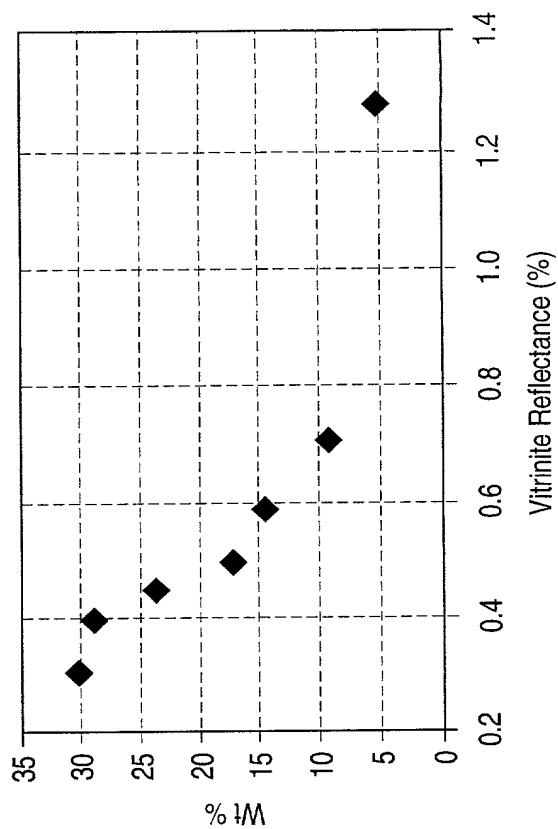
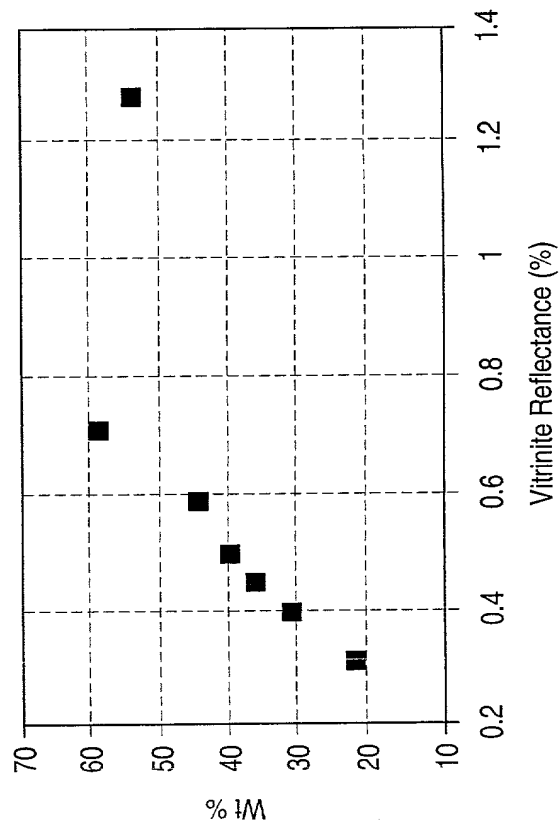
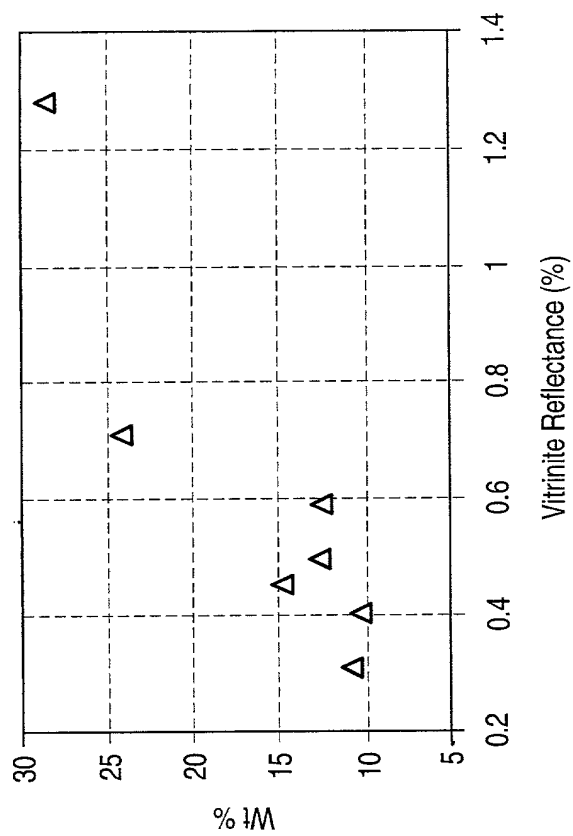
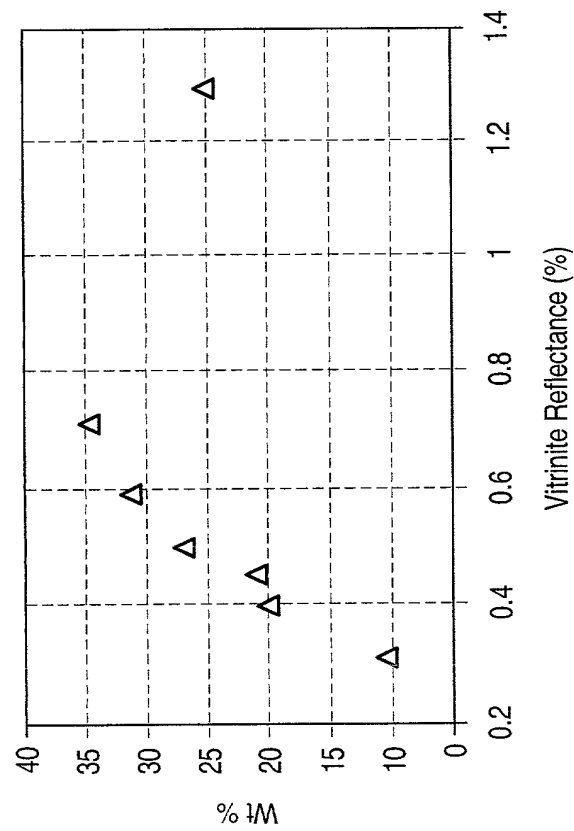


FIG. 114



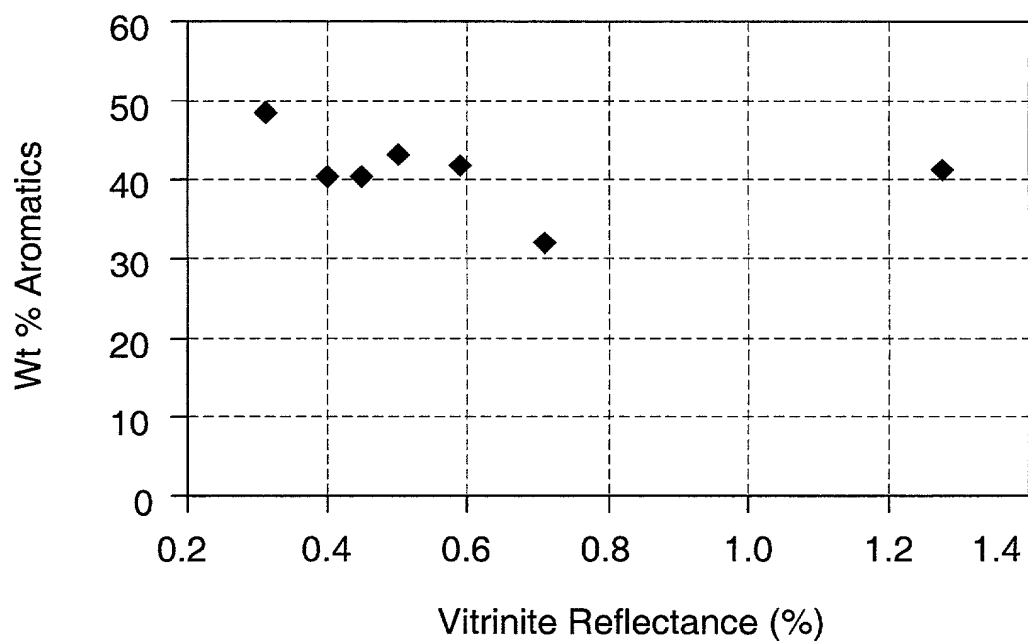


FIG. 119

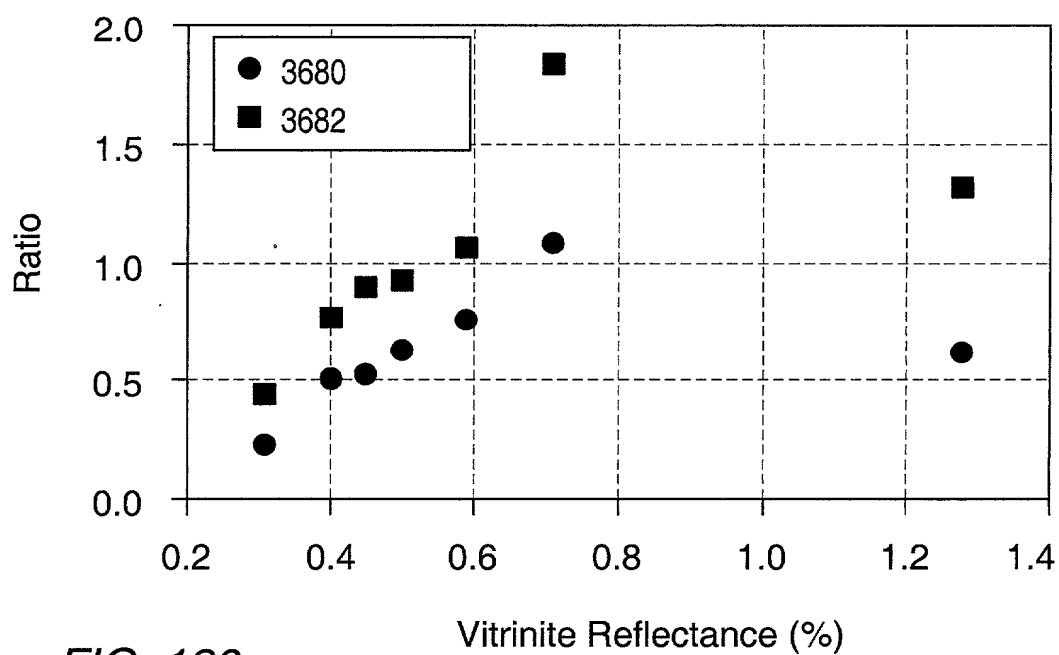
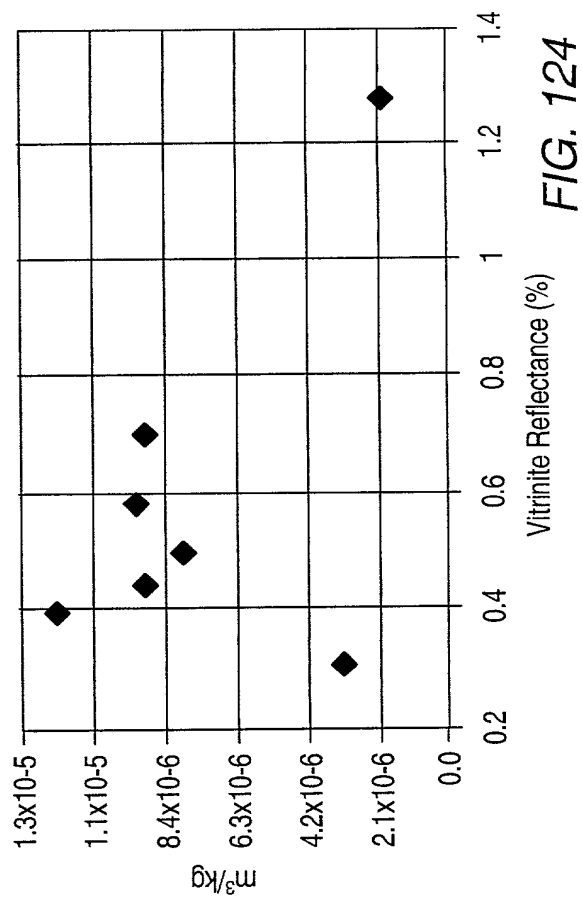
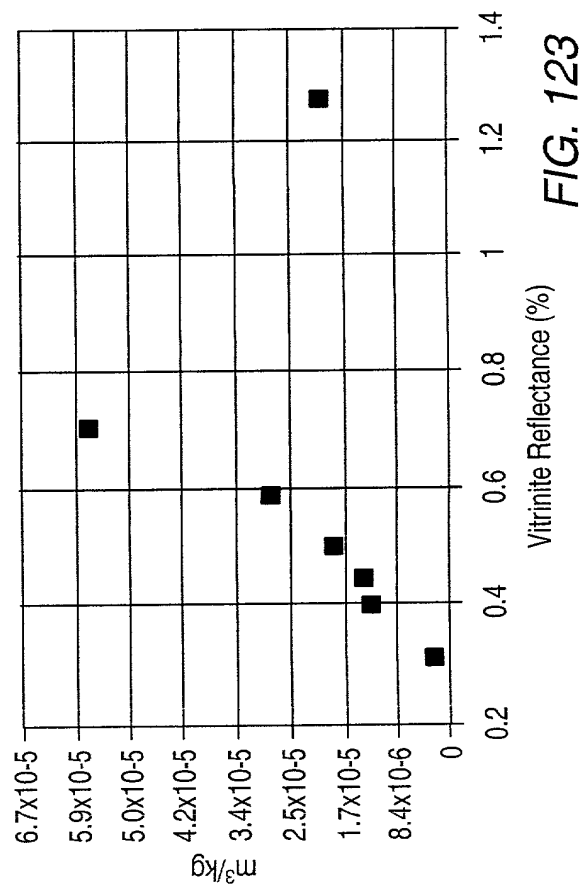
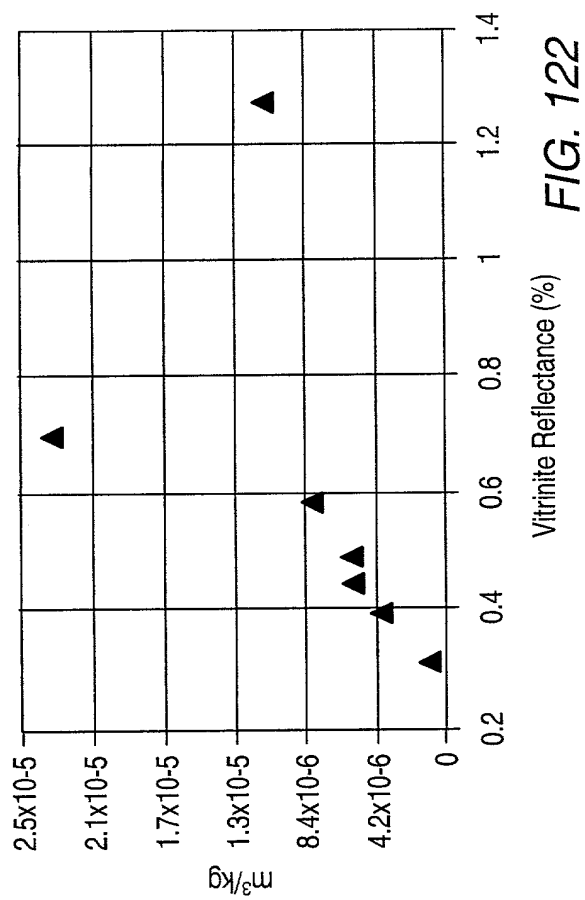
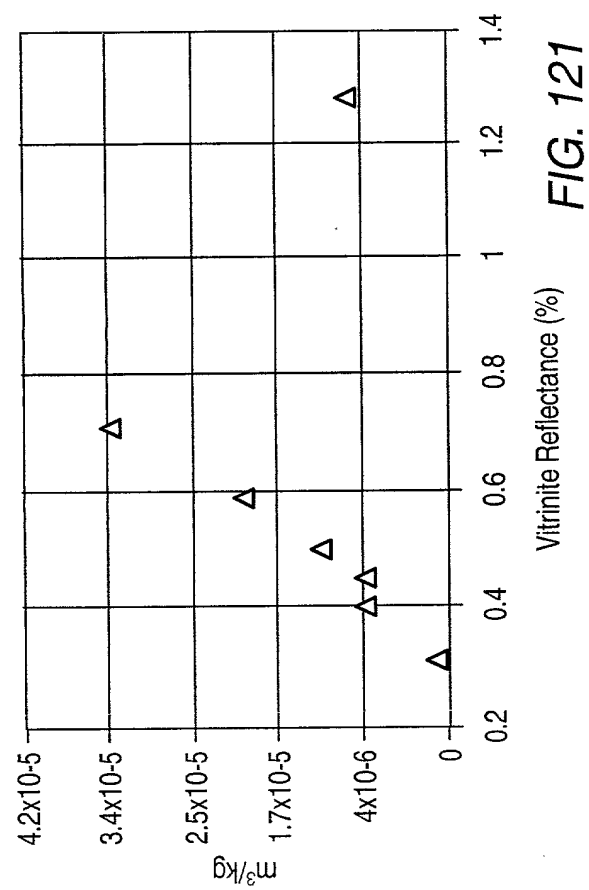


FIG. 120



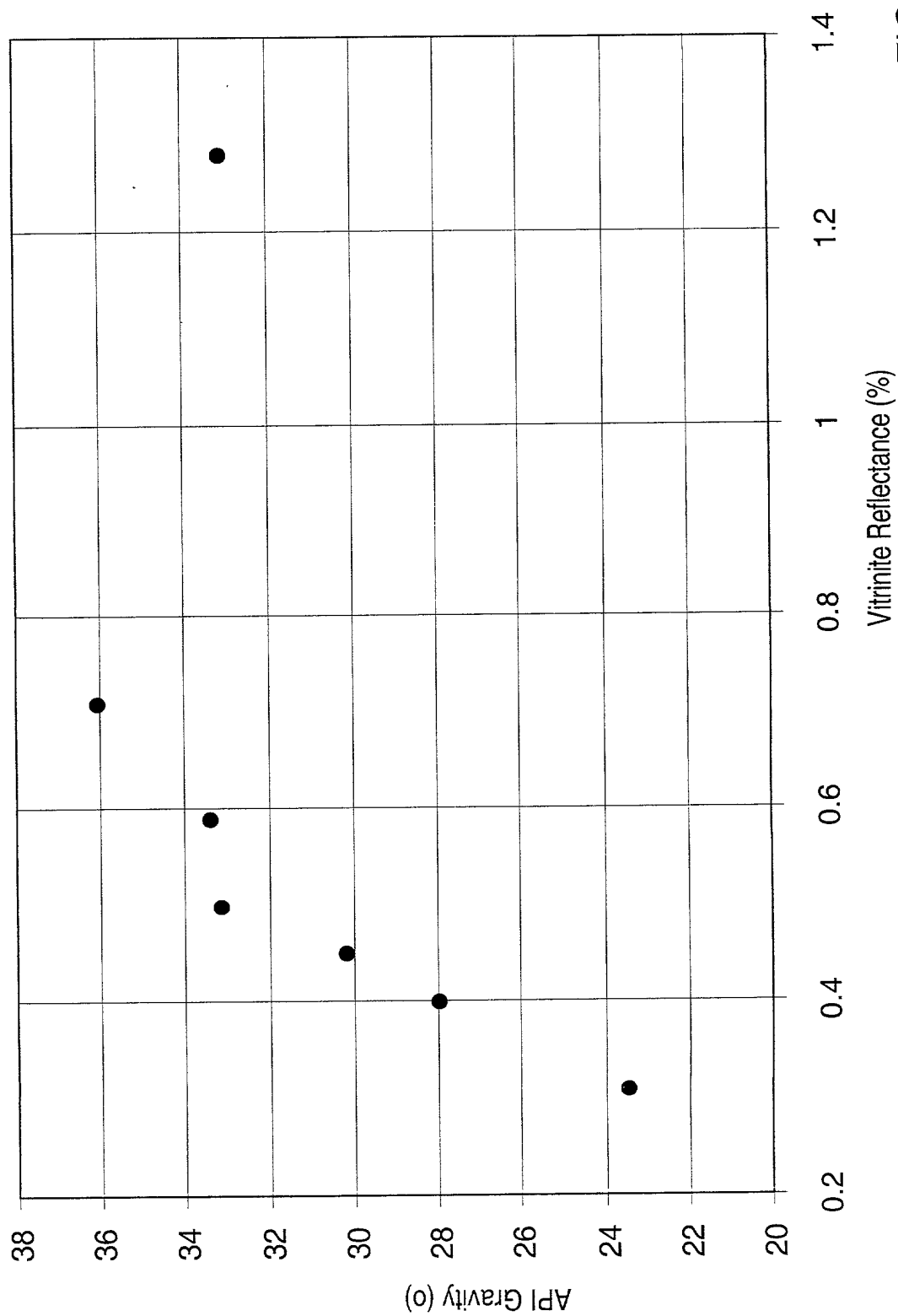
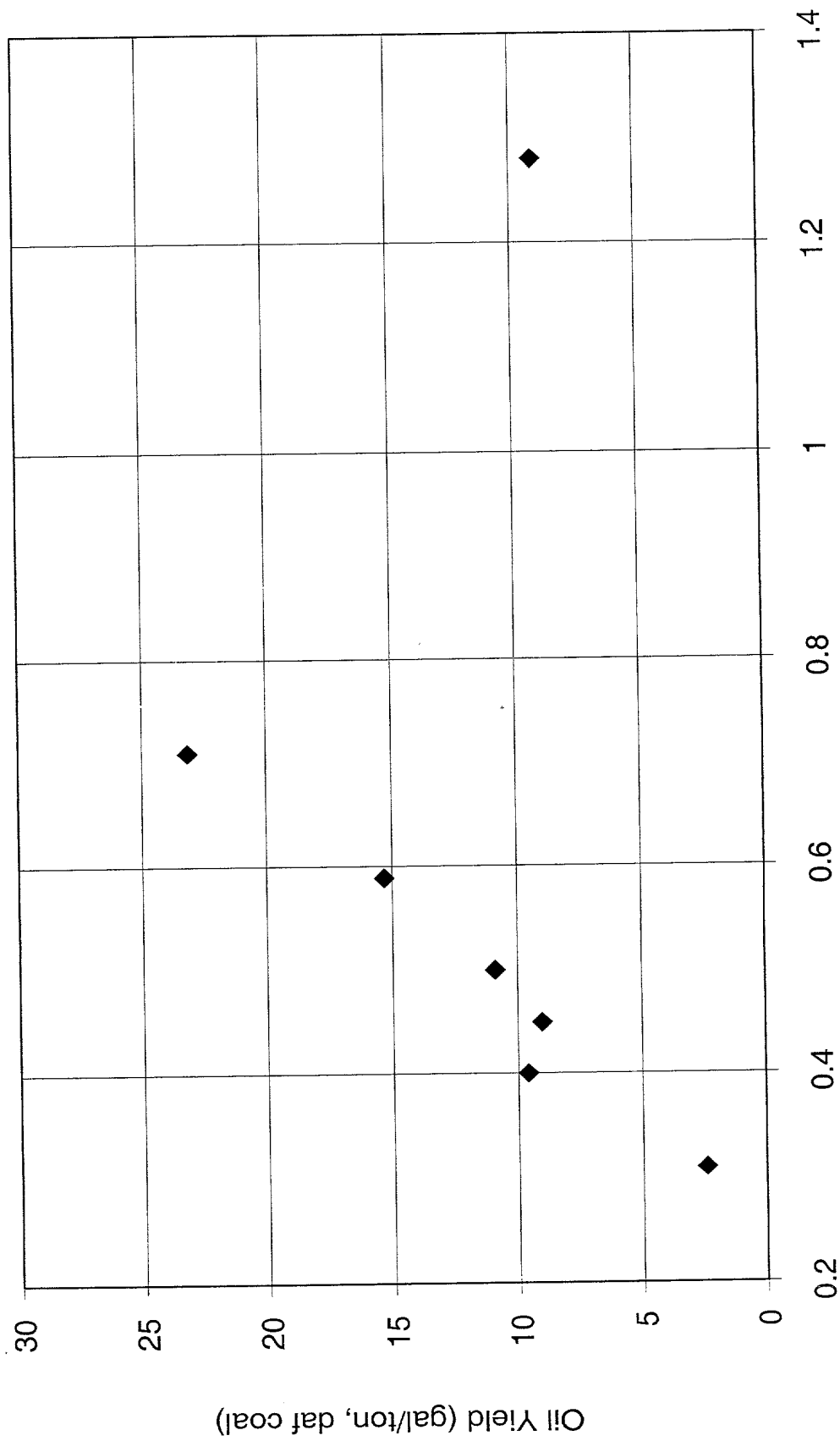


FIG. 125

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BULLETIN 1452-A
1972



Vitrinite Reflectance (%)

FIG. 126

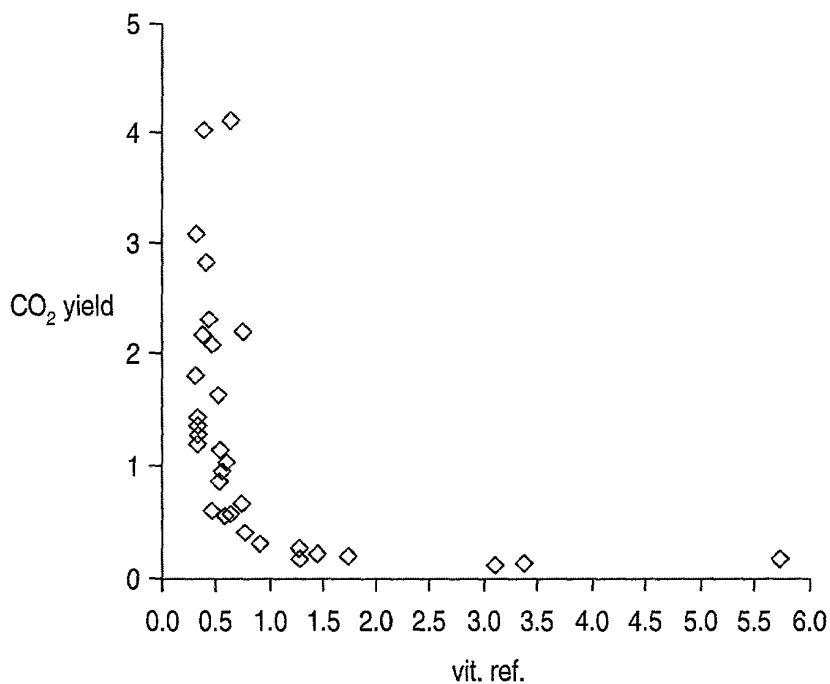


FIG. 127

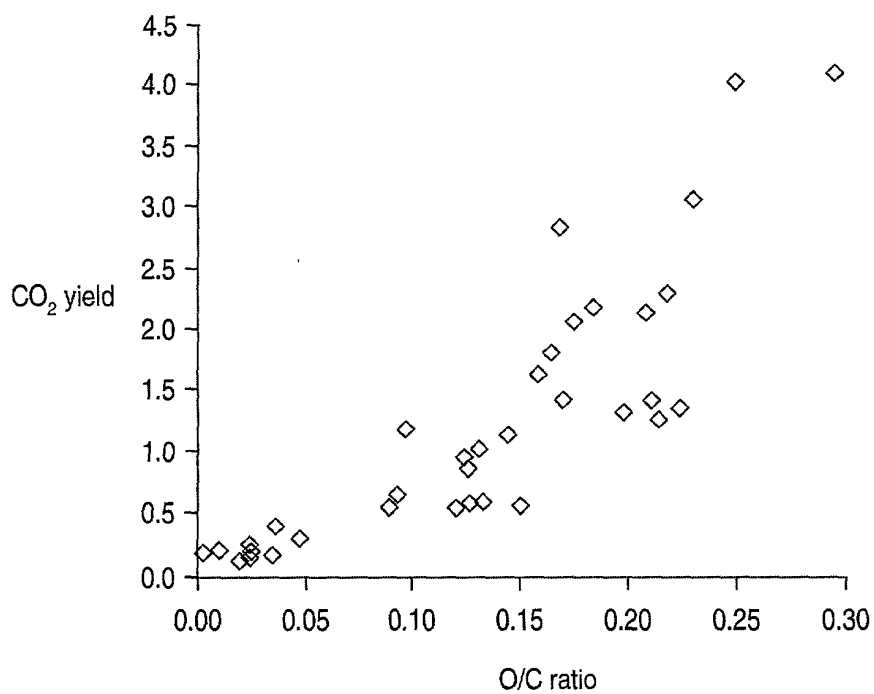


FIG. 128

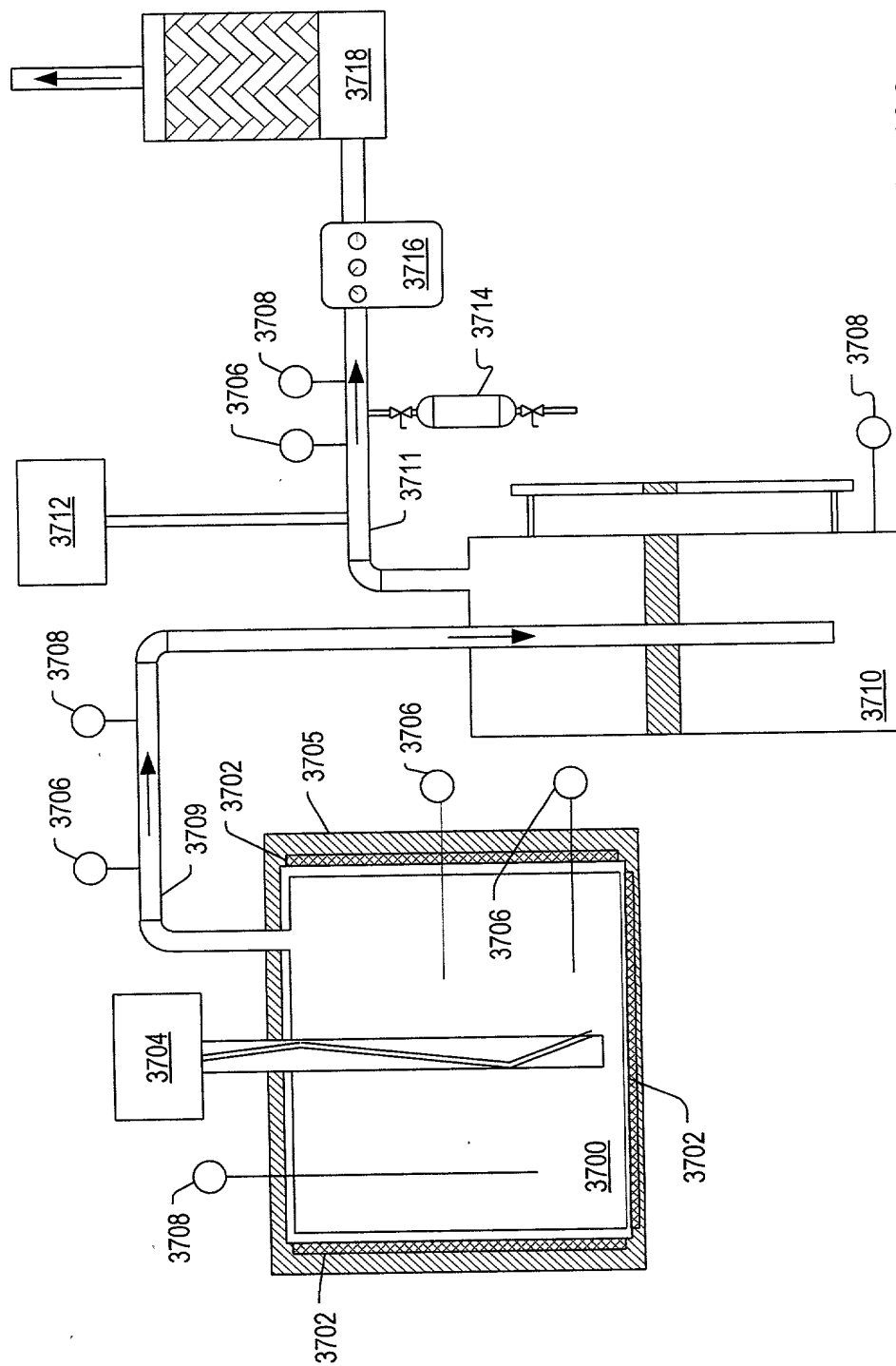


FIG. 129

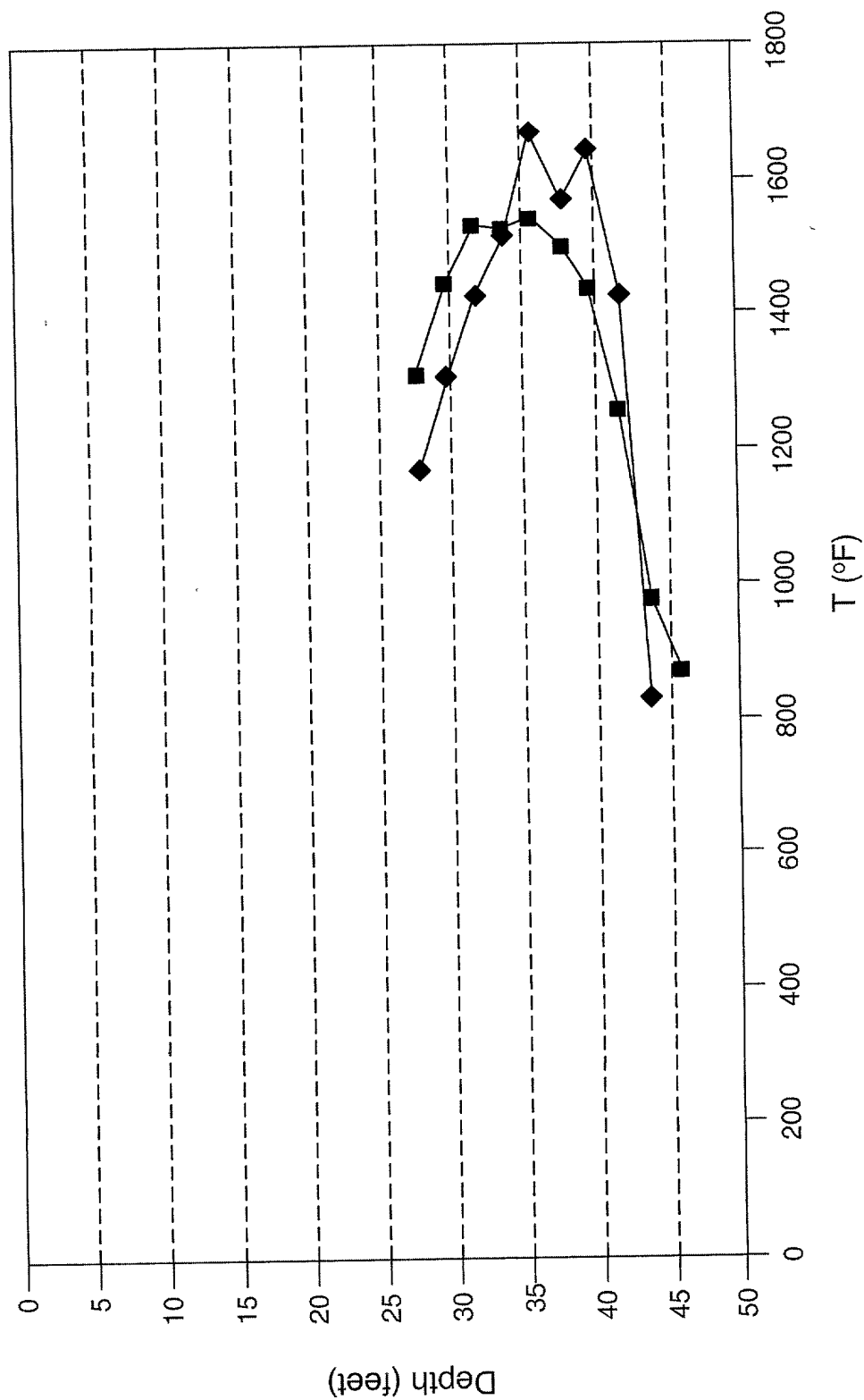


FIG. 130

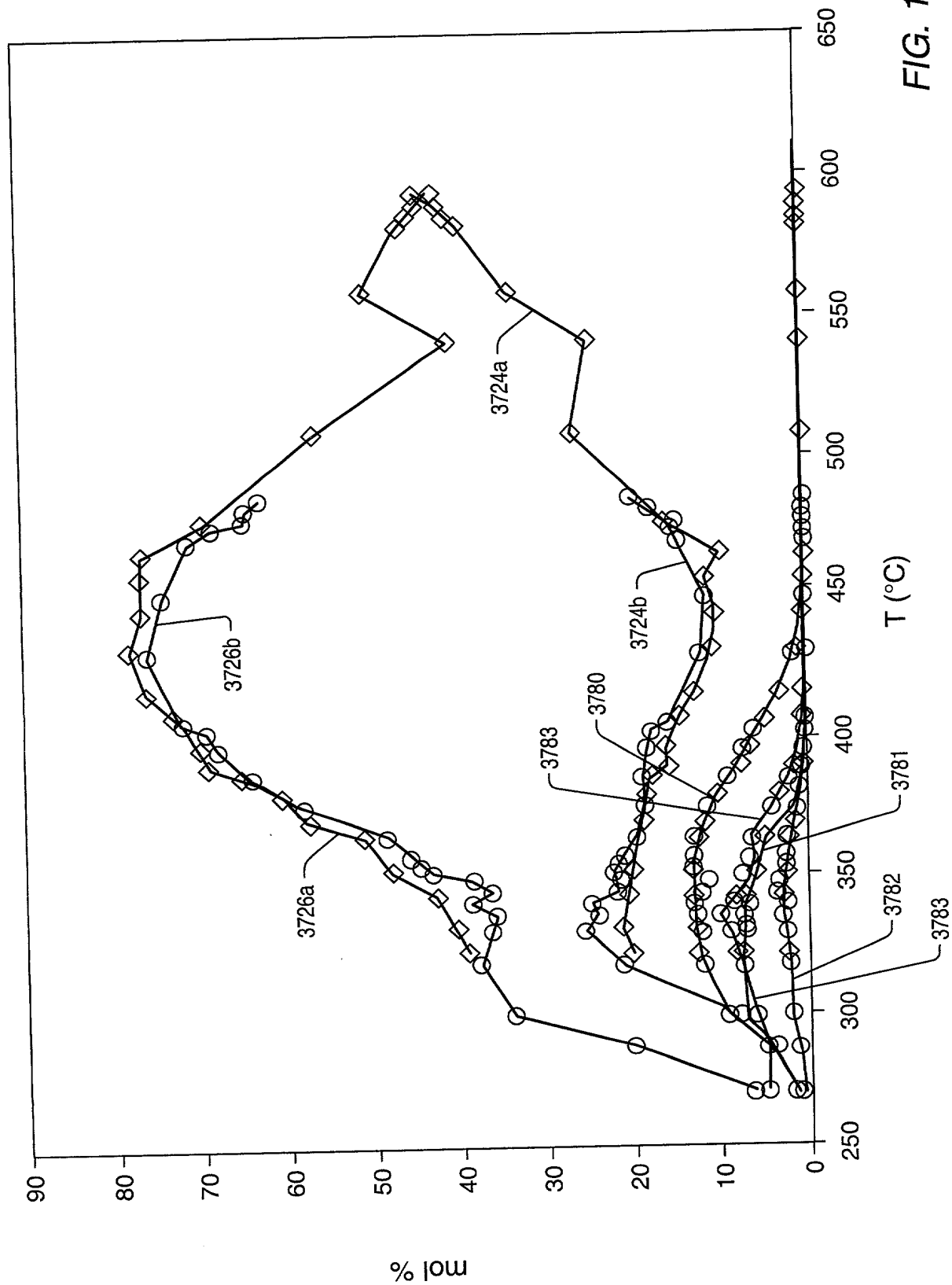


FIG. 131

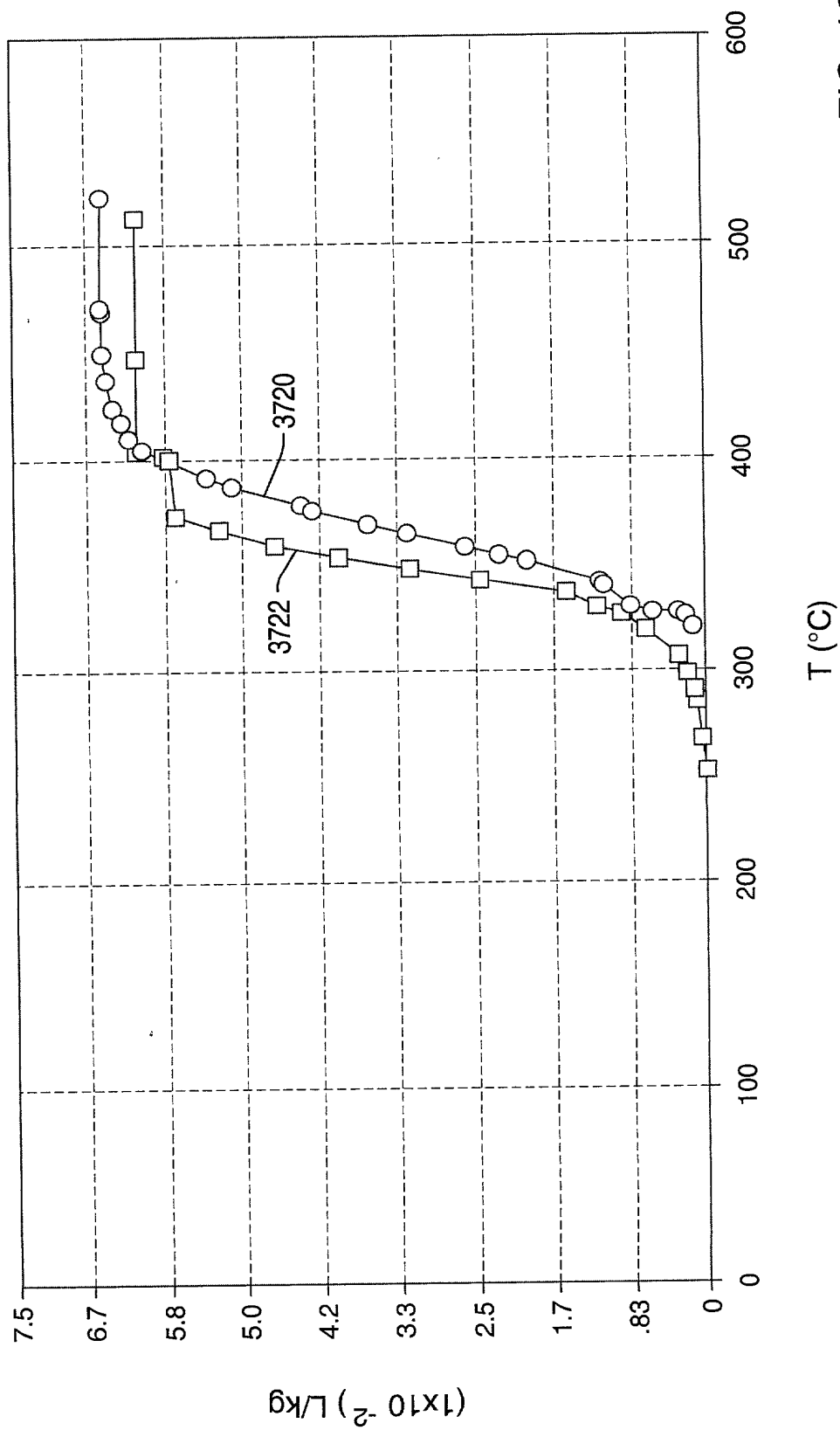


FIG. 133

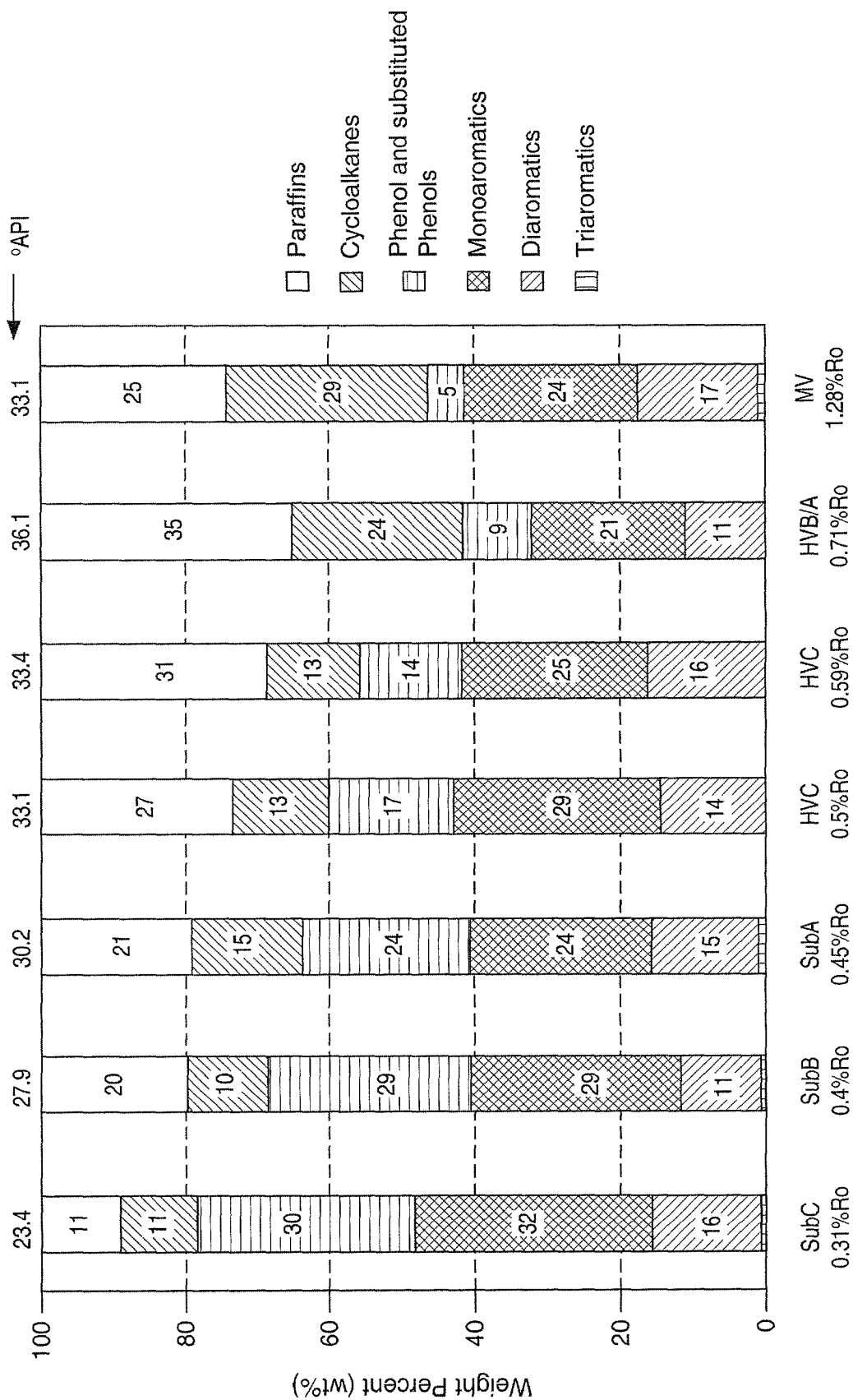


FIG. 134

FIG. 135

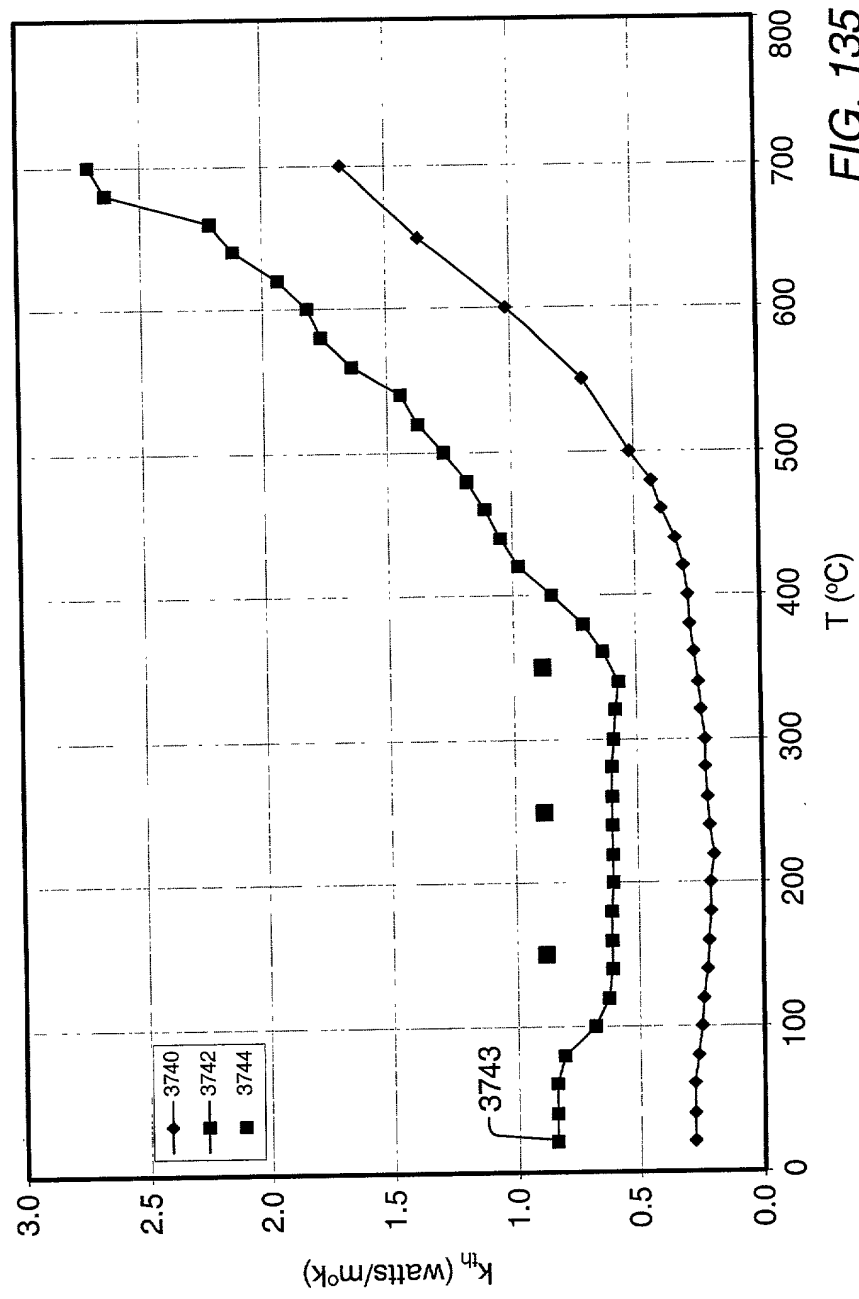


FIG. 135

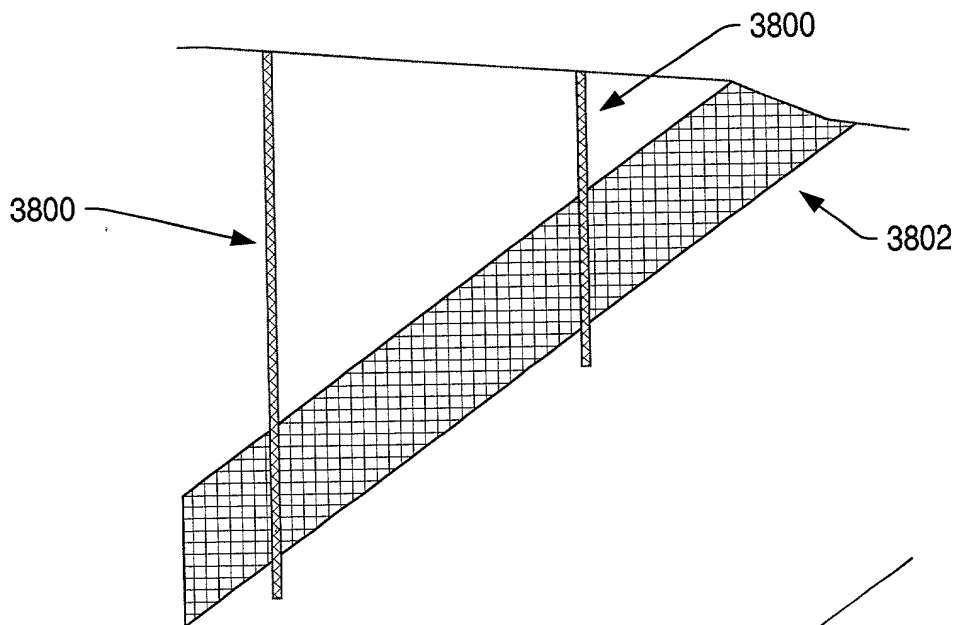


FIG. 136

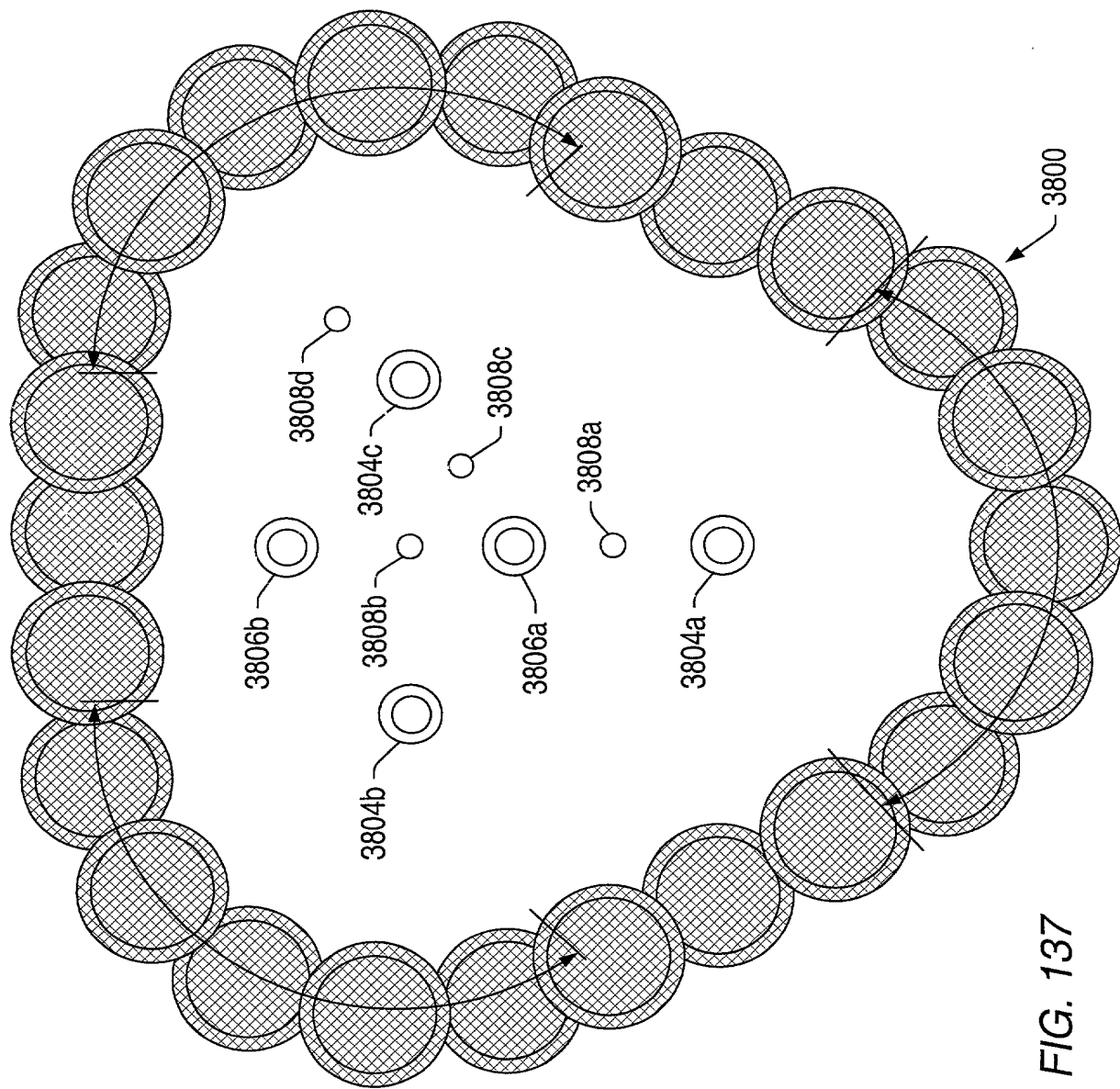


FIG. 137

1. The temperature of the water in the tank was 20°C at the start of the experiment.
 2. The temperature of the water in the tank was 20°C at the start of the experiment.
 3. The temperature of the water in the tank was 20°C at the start of the experiment.
 4. The temperature of the water in the tank was 20°C at the start of the experiment.
 5. The temperature of the water in the tank was 20°C at the start of the experiment.
 6. The temperature of the water in the tank was 20°C at the start of the experiment.
 7. The temperature of the water in the tank was 20°C at the start of the experiment.
 8. The temperature of the water in the tank was 20°C at the start of the experiment.
 9. The temperature of the water in the tank was 20°C at the start of the experiment.
 10. The temperature of the water in the tank was 20°C at the start of the experiment.

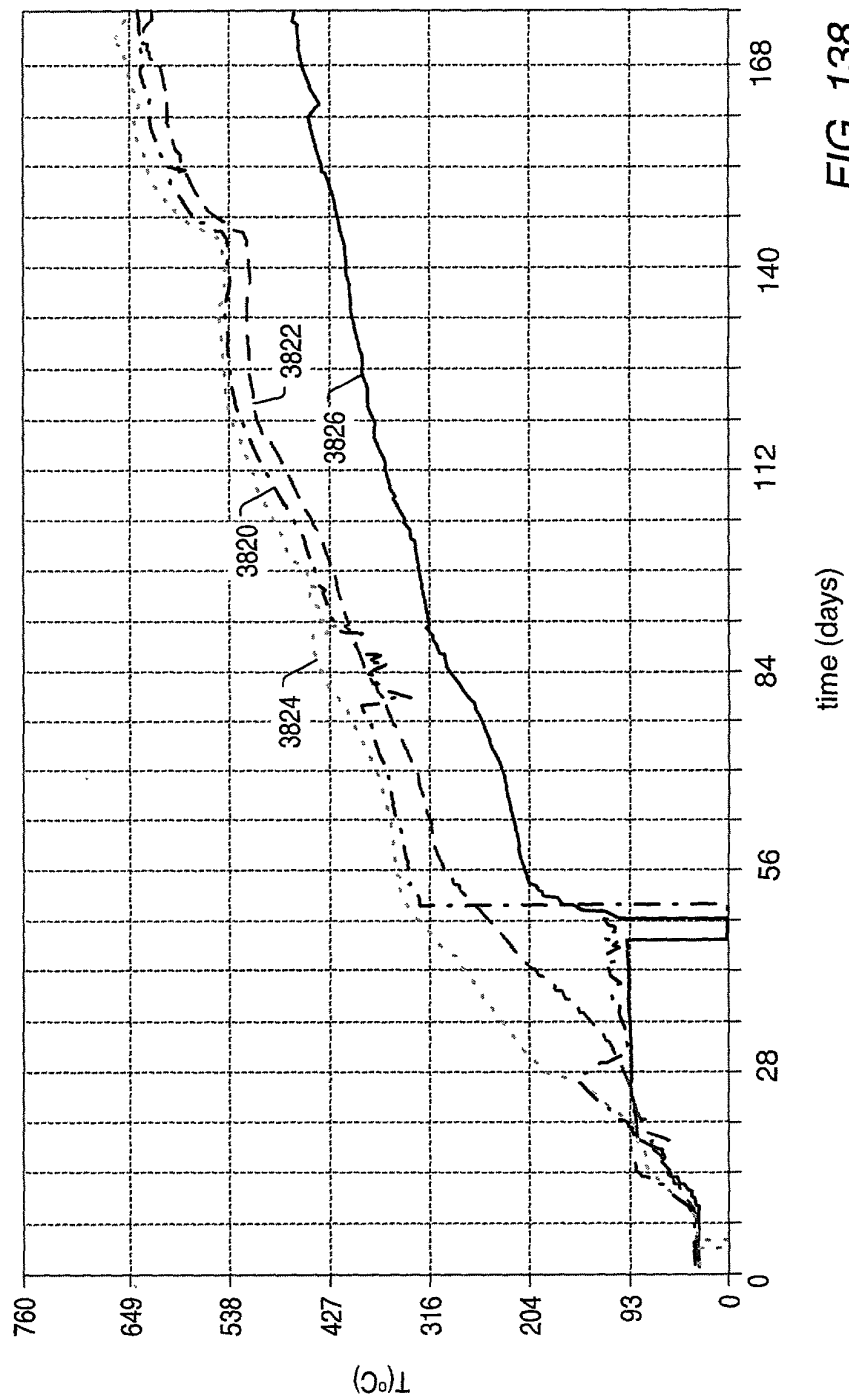


FIG. 138

FIG. 139

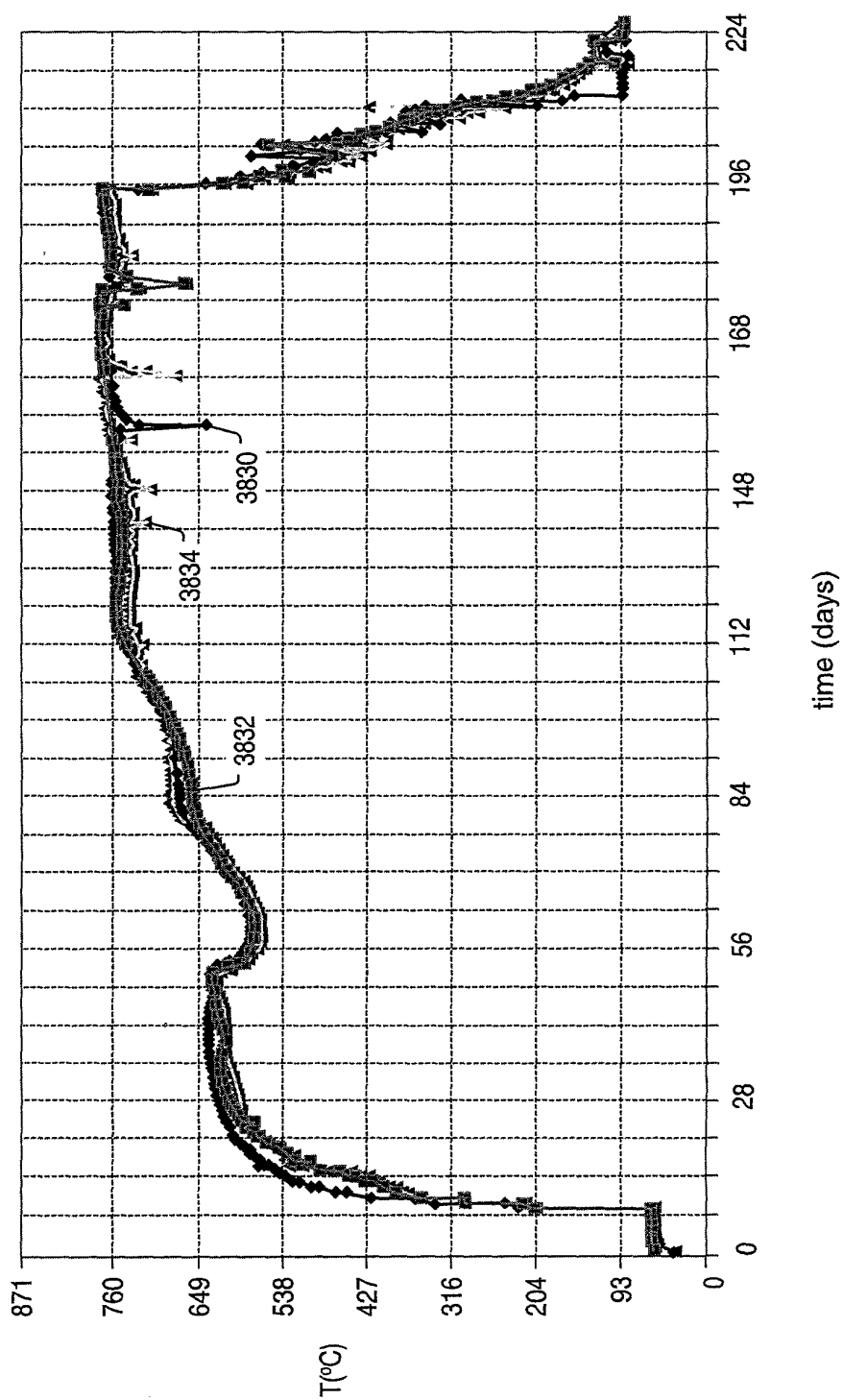


FIG. 139

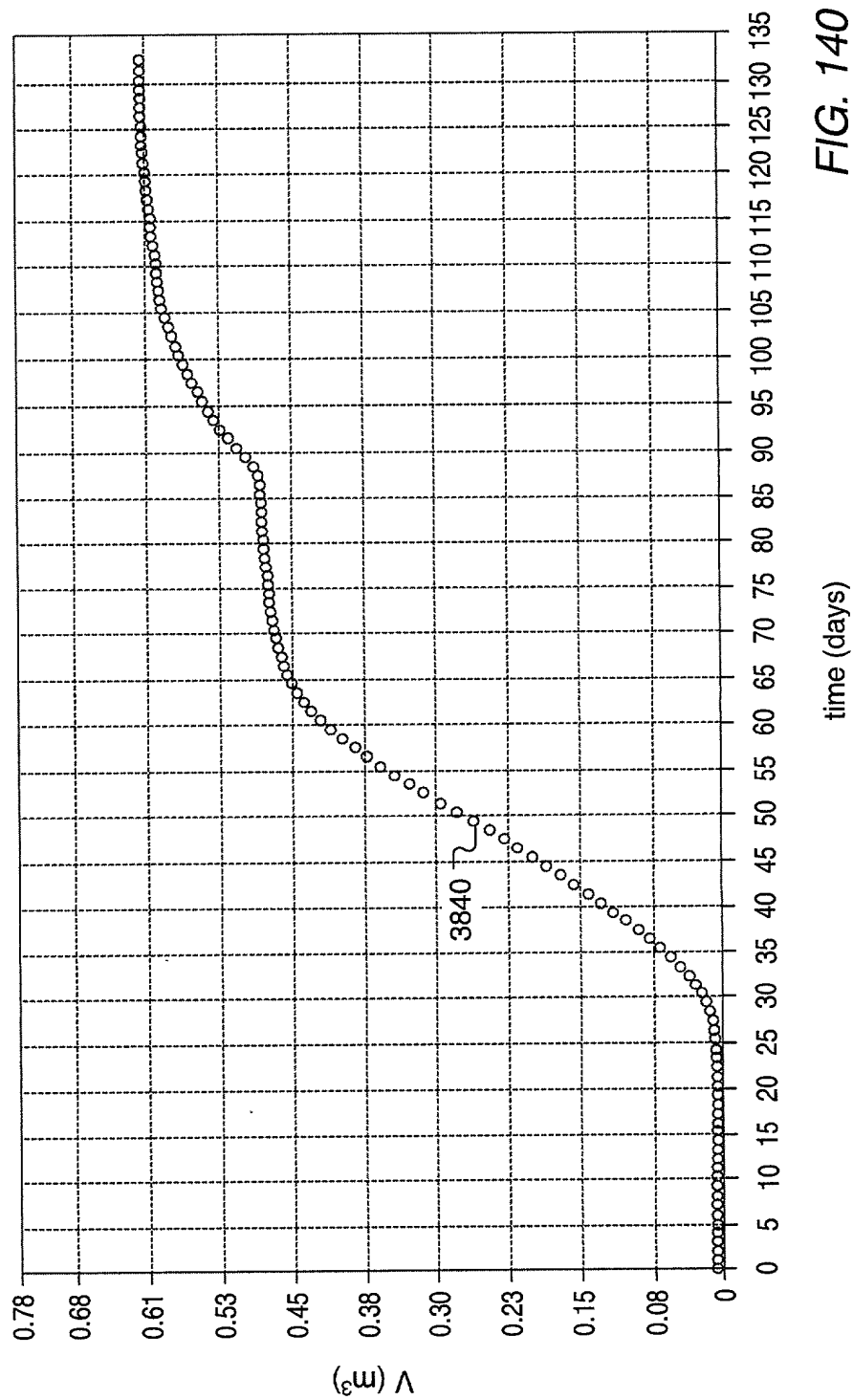


FIG. 140

Figure 1 is a line graph with data points showing the relationship between the number of cycles (C #) on the x-axis and the weight percentage (Wt %) of the polymer component on the y-axis. The x-axis ranges from 5 to 41 with major ticks every 2 units. The y-axis ranges from 0 to 11 with major ticks every 1 unit. The data points are connected by a smooth curve. The weight percentage starts at approximately 0.2% at cycle 5, rises to about 1.2% at cycle 7, 3.2% at cycle 9, 4.5% at cycle 11, 6.2% at cycle 13, 7.5% at cycle 15, 8.5% at cycle 17, 9.5% at cycle 19, and then rises sharply to about 10.5% at cycle 21. From cycle 21 to cycle 41, the weight percentage remains constant at approximately 10.5%.

C #	Wt %
5	0.2
7	1.2
9	3.2
11	4.5
13	6.2
15	7.5
17	8.5
19	9.5
21	10.5
23	10.5
25	10.5
27	10.5
29	10.5
31	10.5
33	10.5
35	10.5
37	10.5
39	10.5
41	10.5

○
#

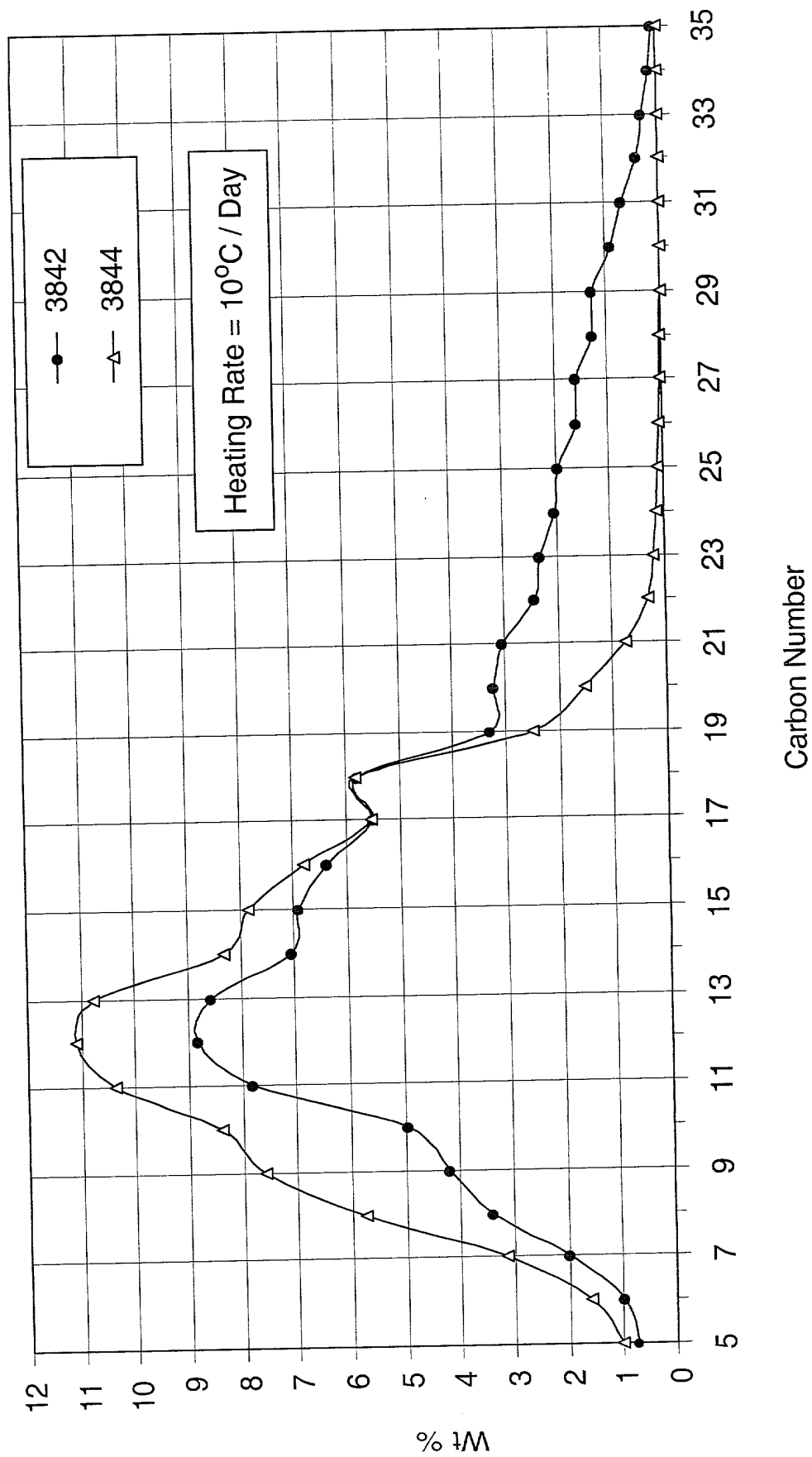


FIG. 142

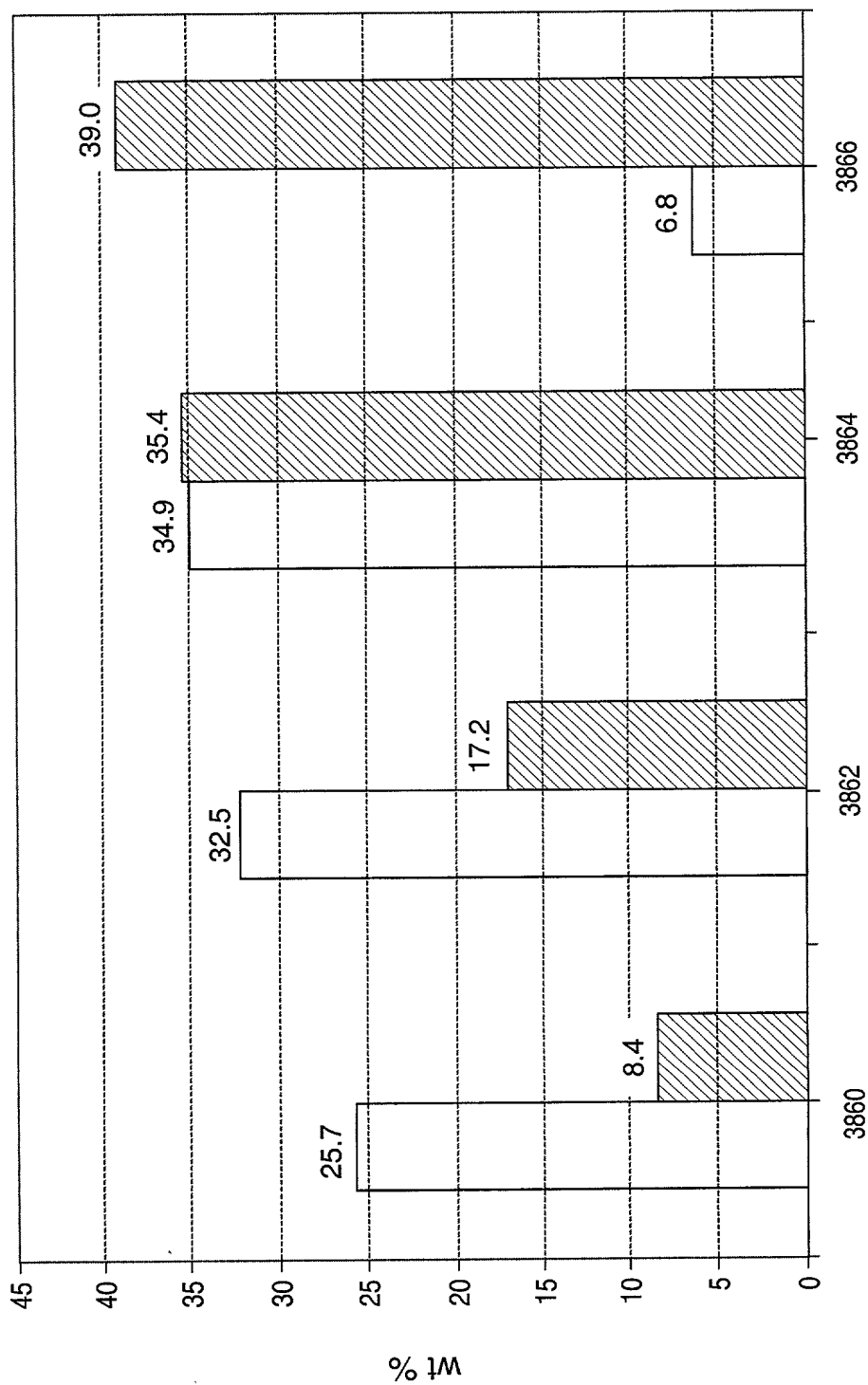


FIG. 143

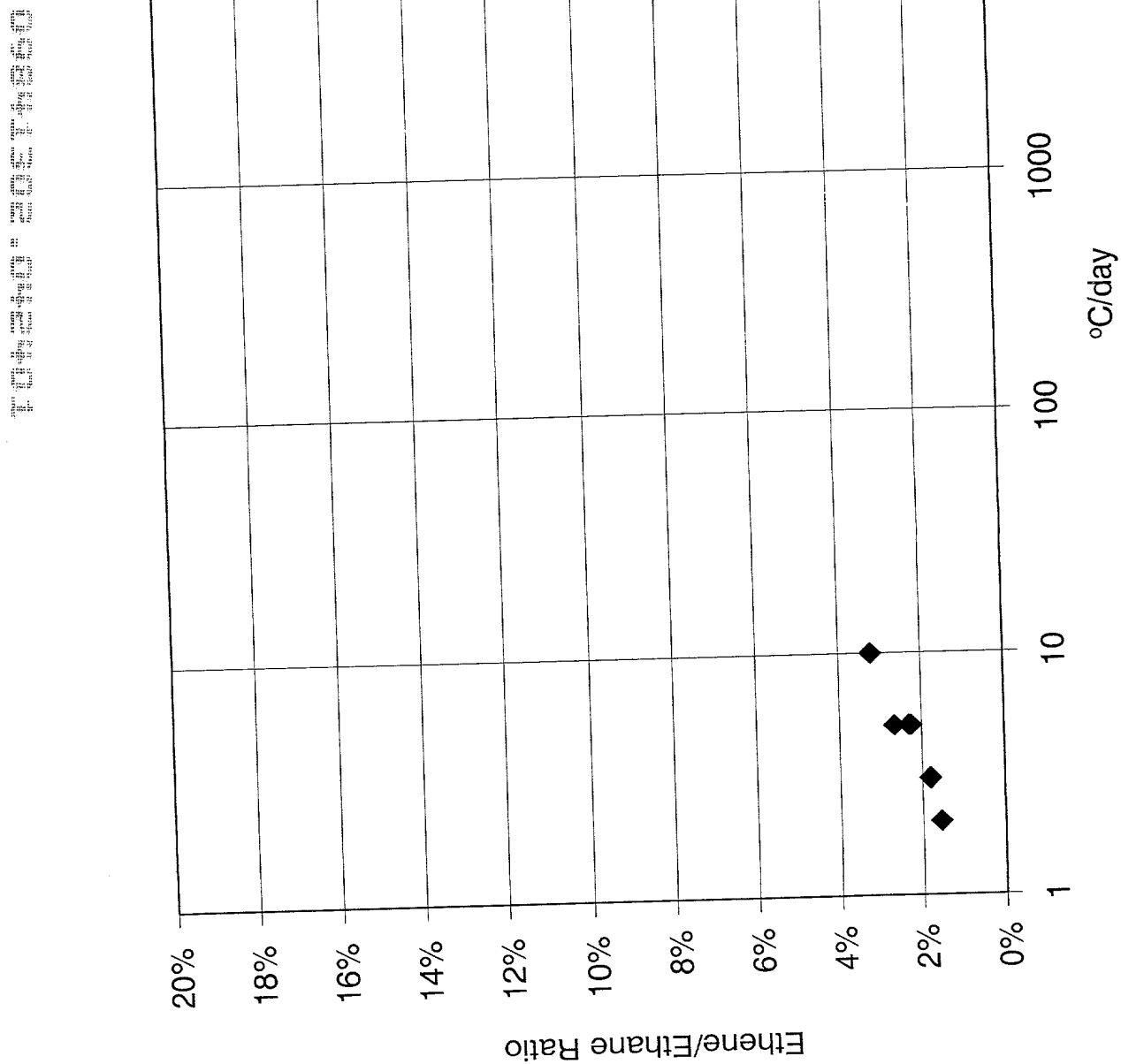


FIG. 144

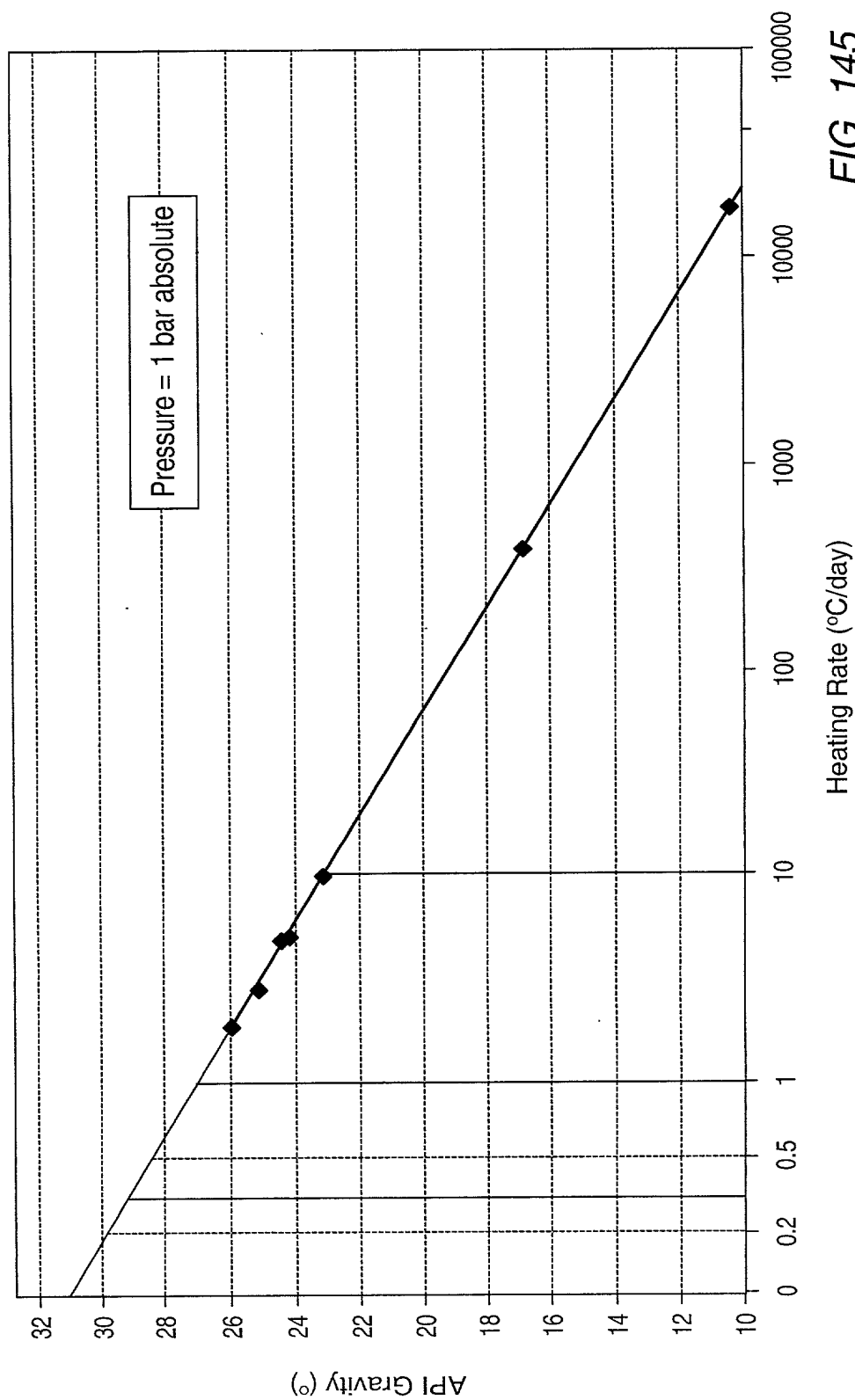


FIG. 145

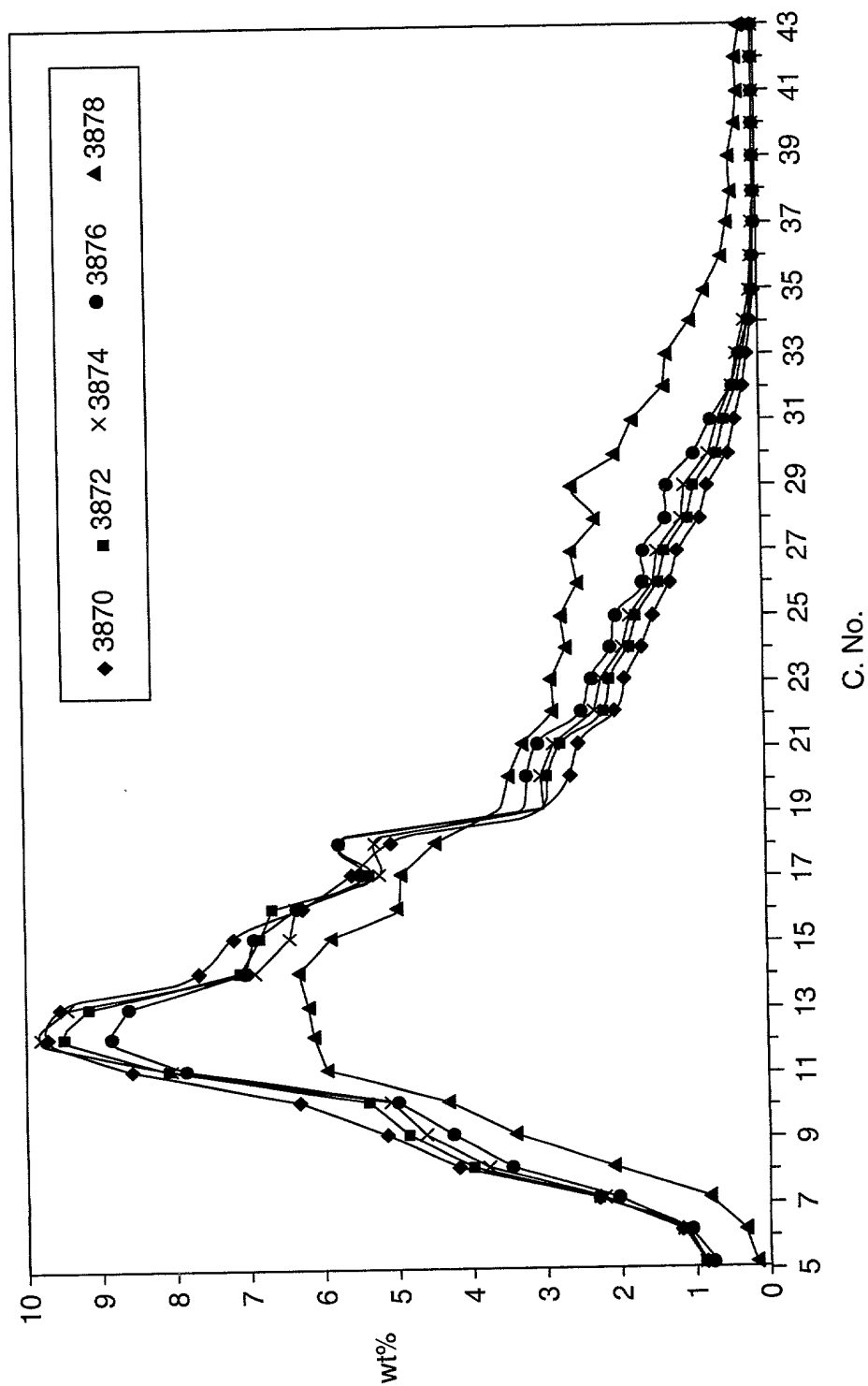


FIG. 146

CO₂ (%) vs. t (minutes)

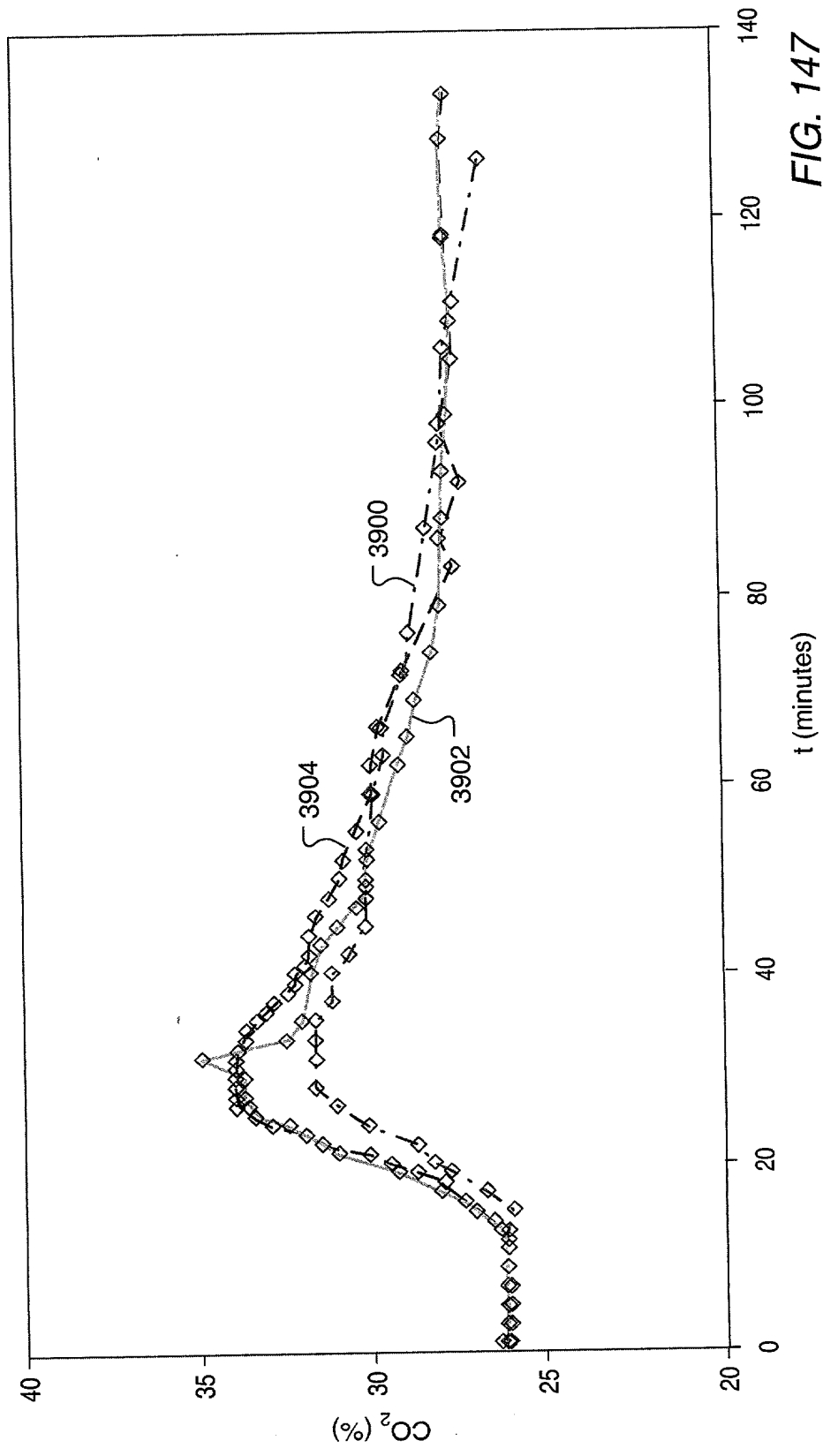


FIG. 147

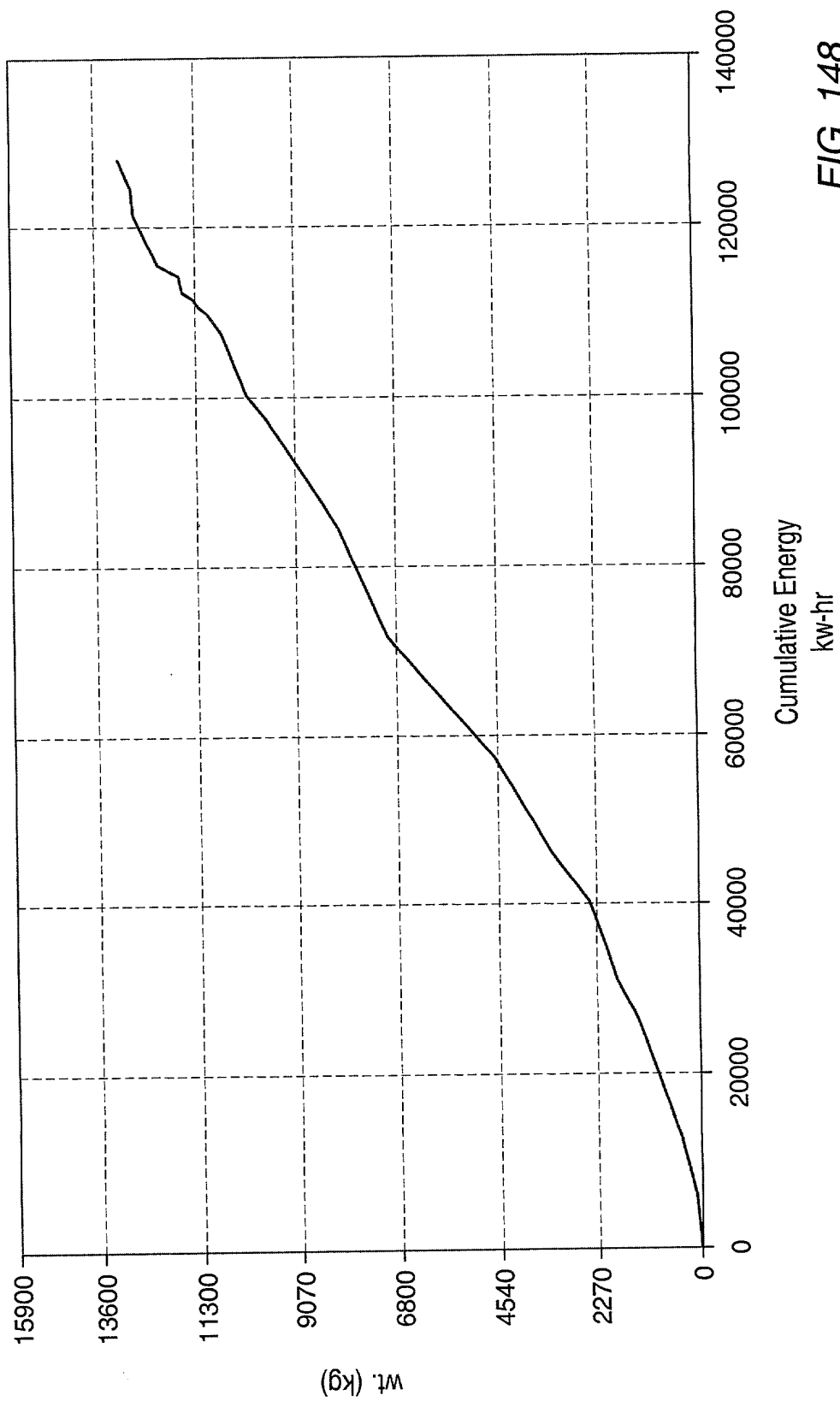


FIG. 148

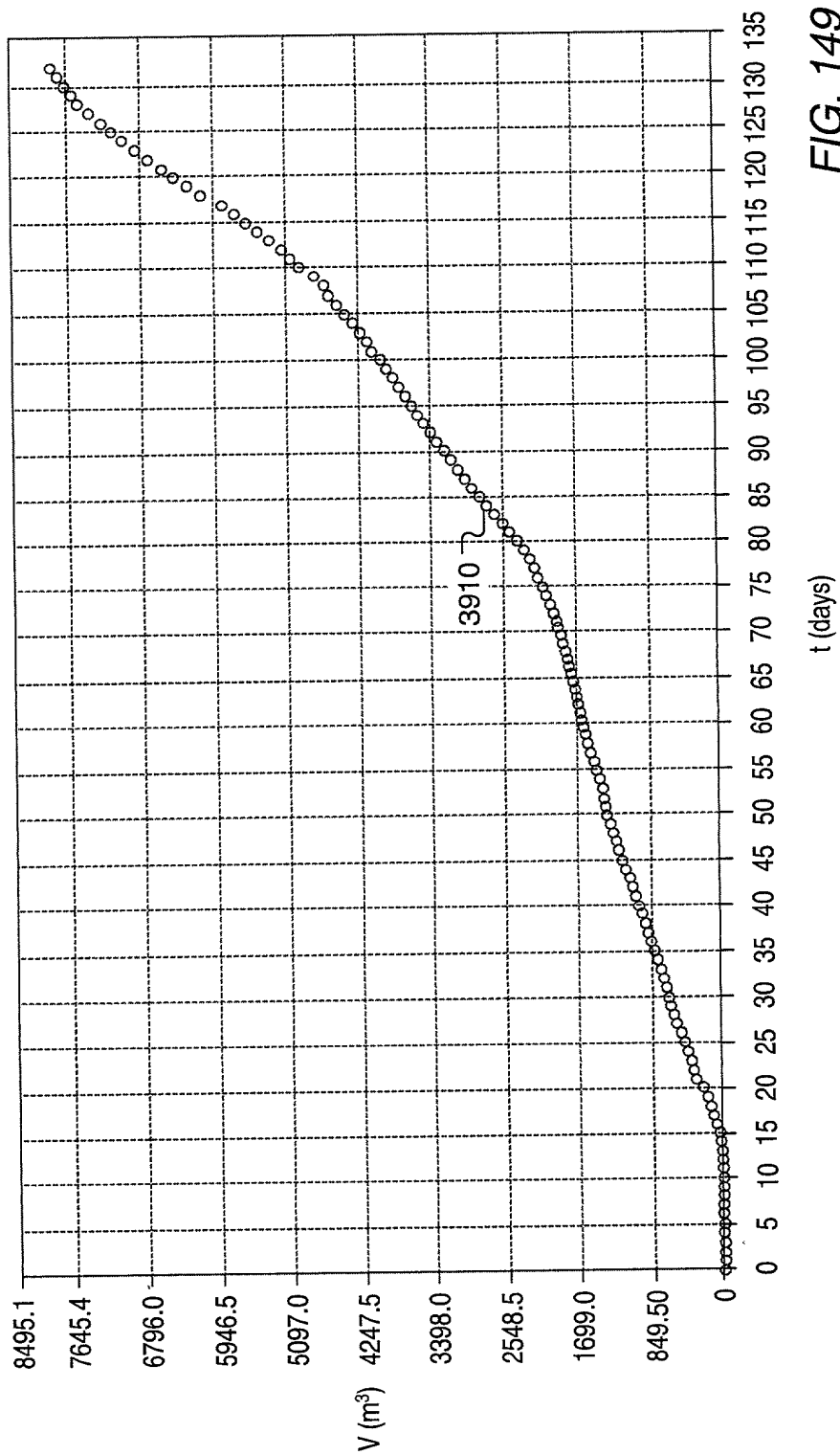


FIG. 149

FIG. 150 is a graph showing the relationship between the volume of water (V) and the energy consumption (E) for a specific system. The y-axis represents V (m³) and the x-axis represents E (kWh). The curve shows that as energy consumption increases, the volume of water also increases, with a significant increase in volume after 80,000 kWh.

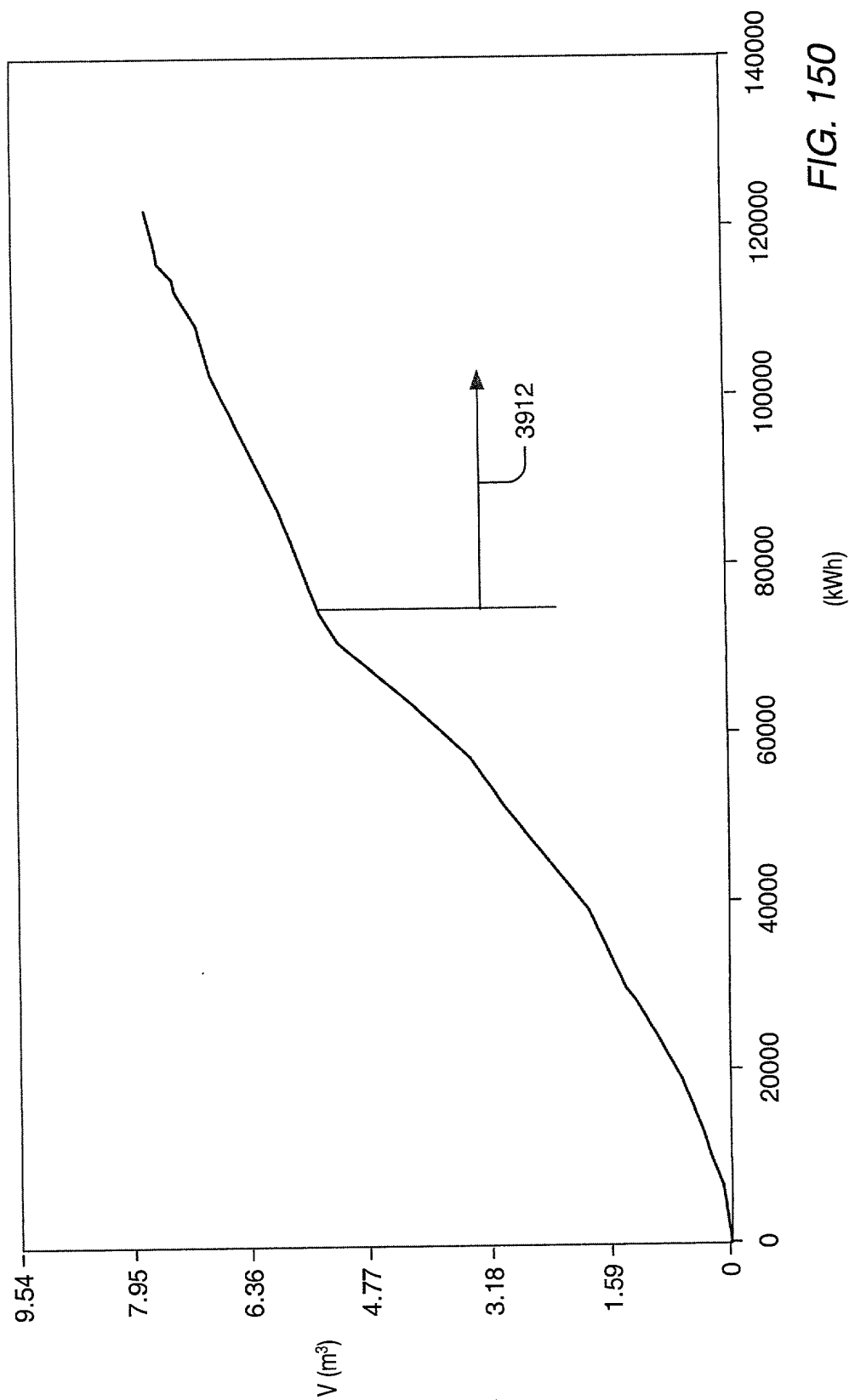


FIG. 150

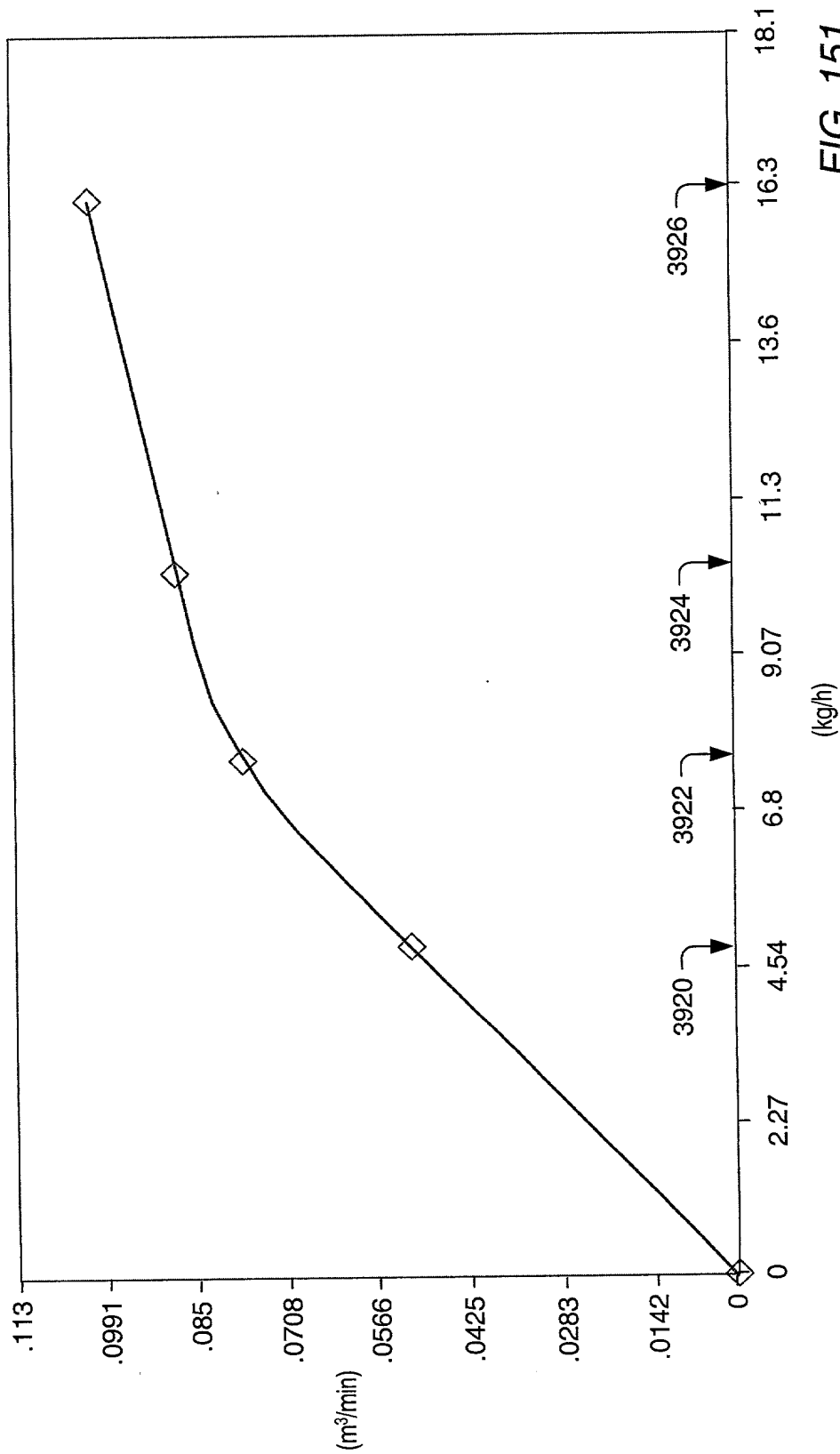
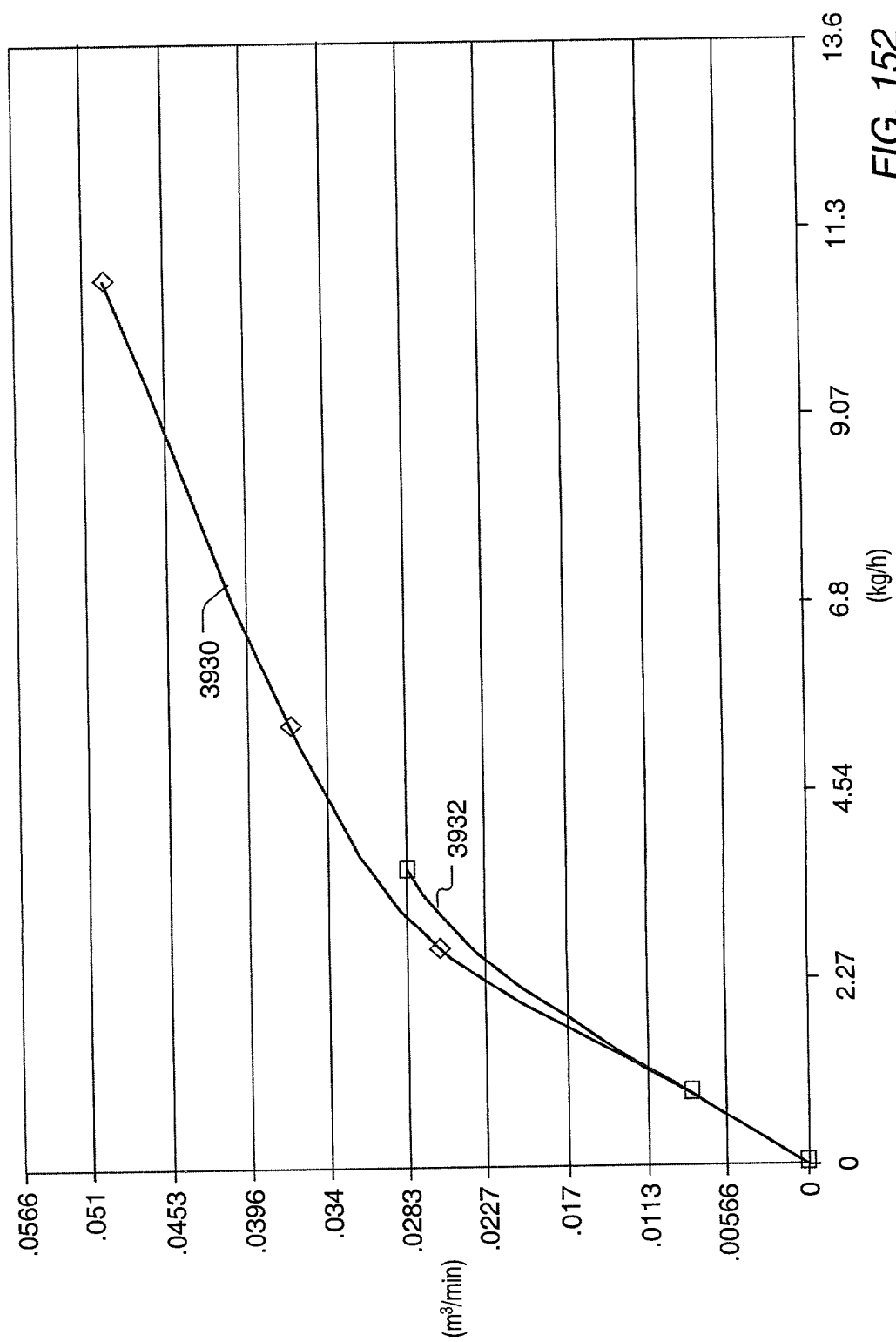


FIG. 151



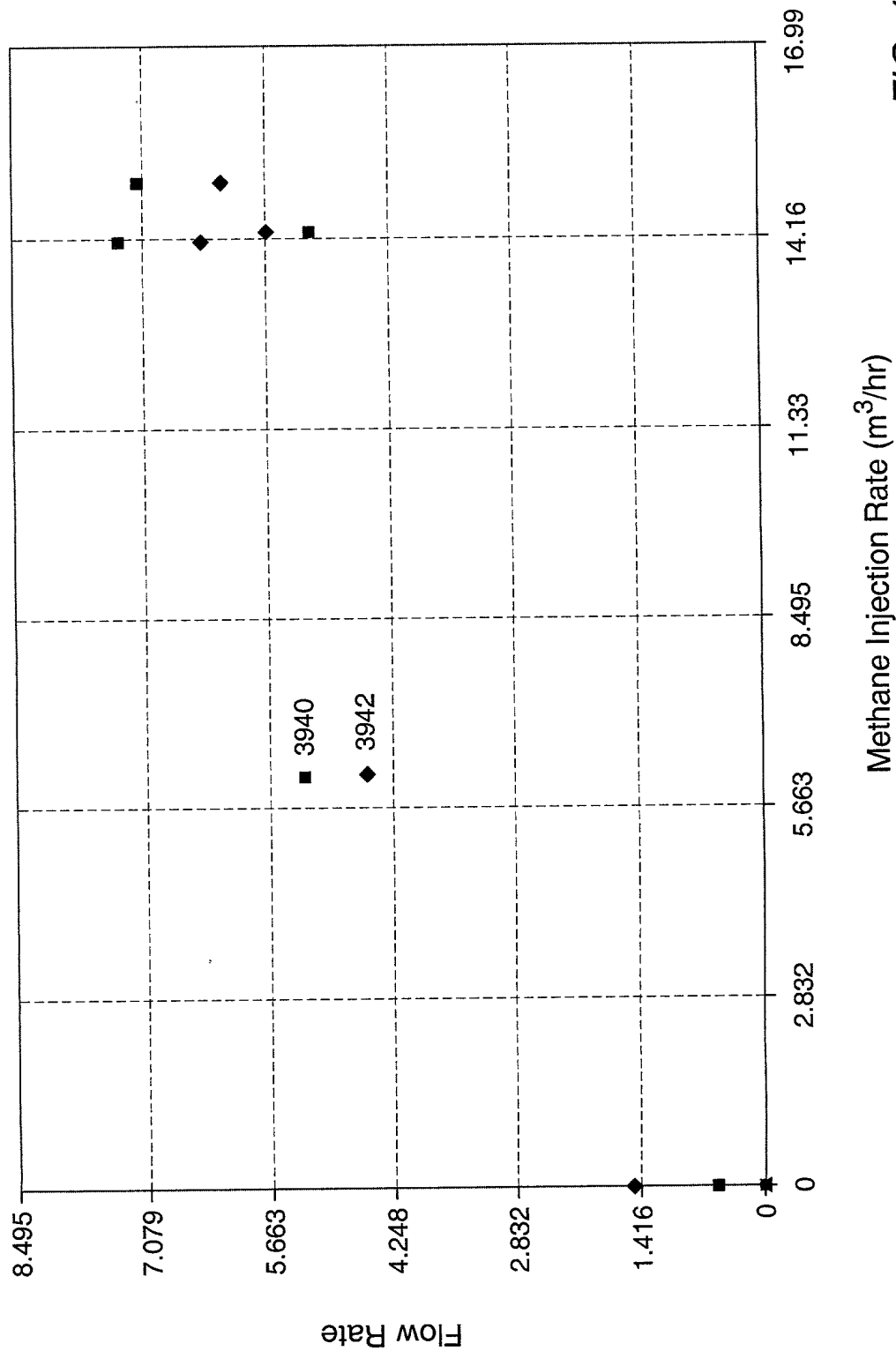


FIG. 153

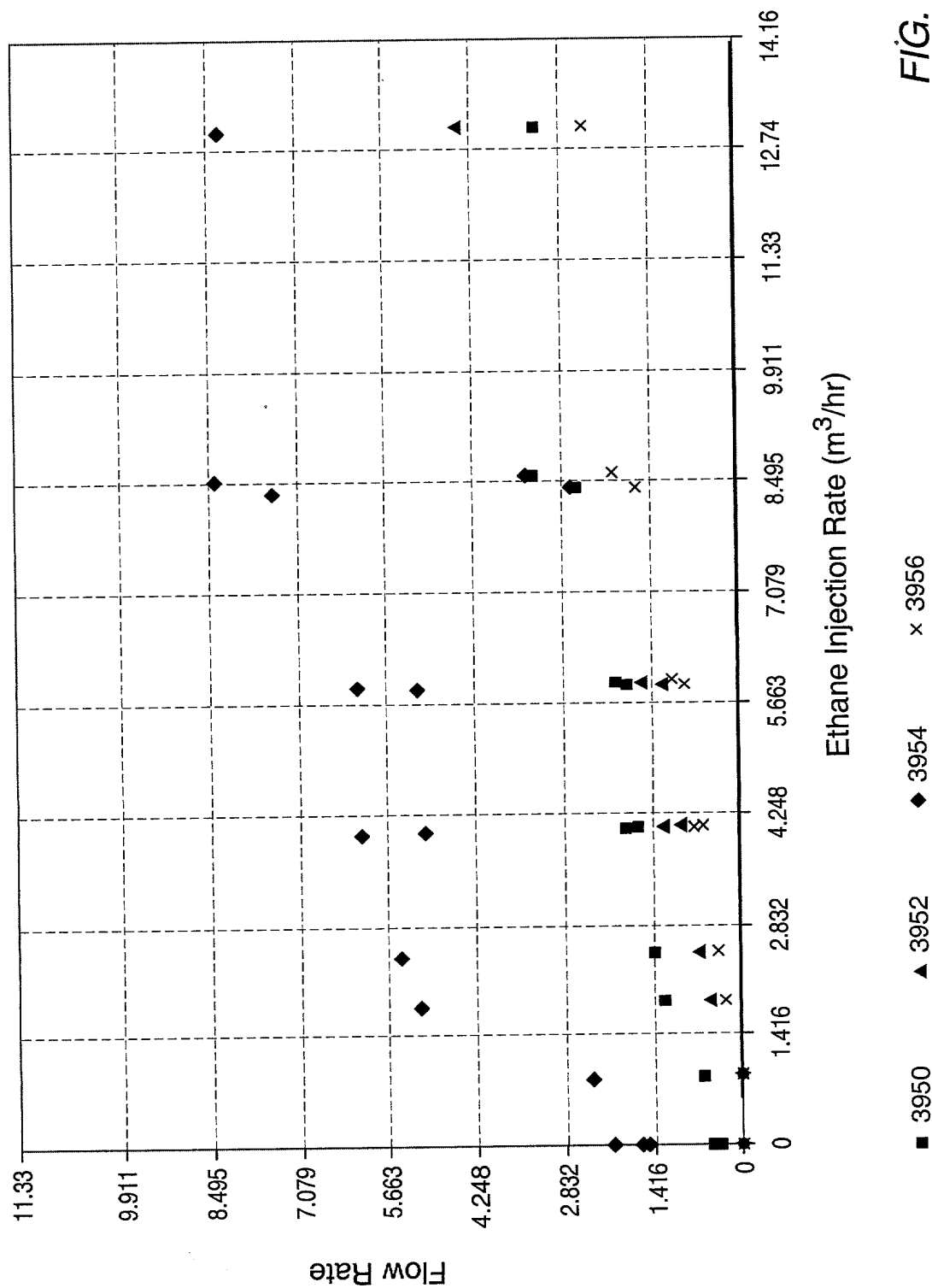


FIG. 154

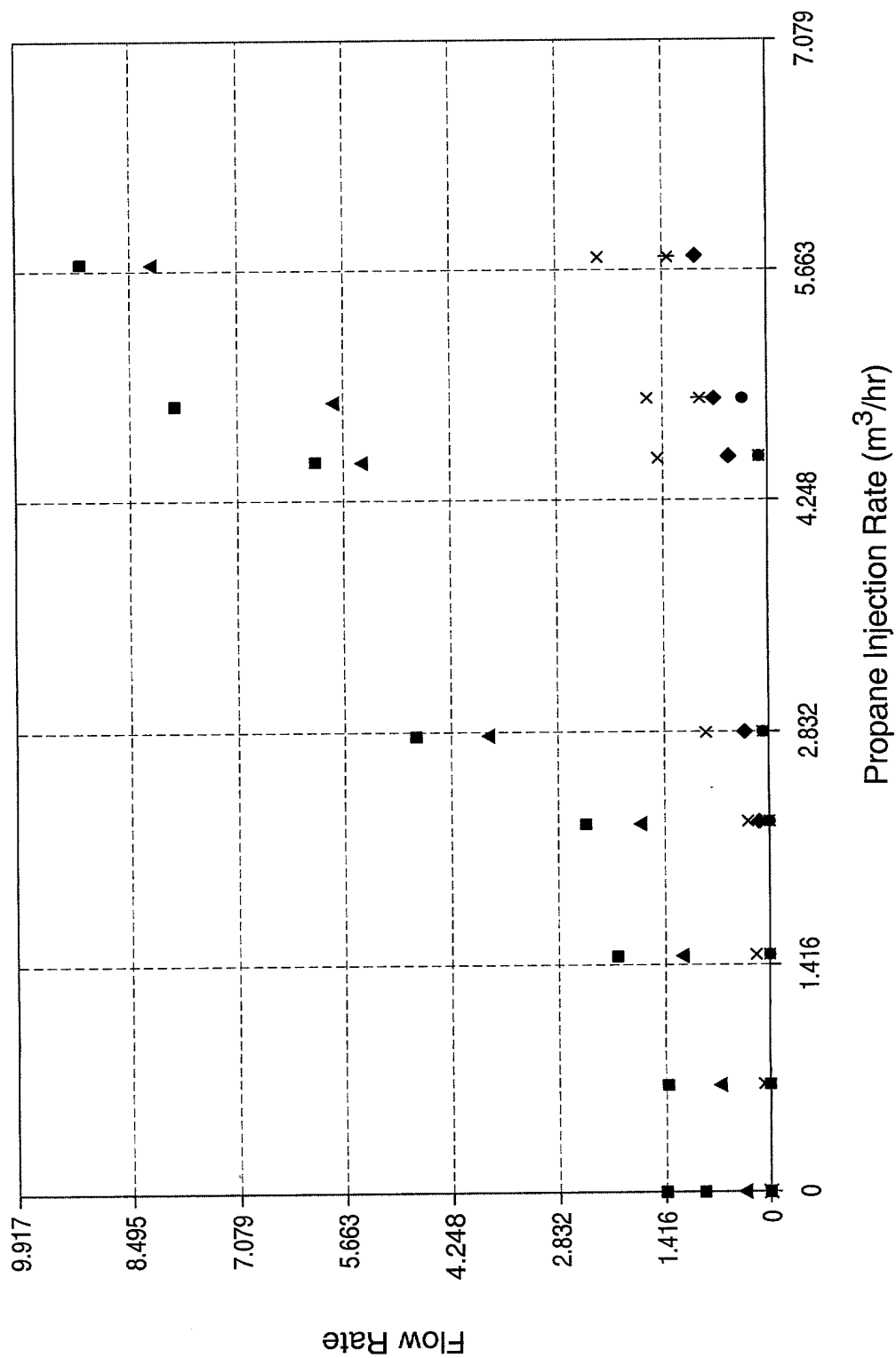


FIG. 155

Flow Rate vs. Butane Injection Rate

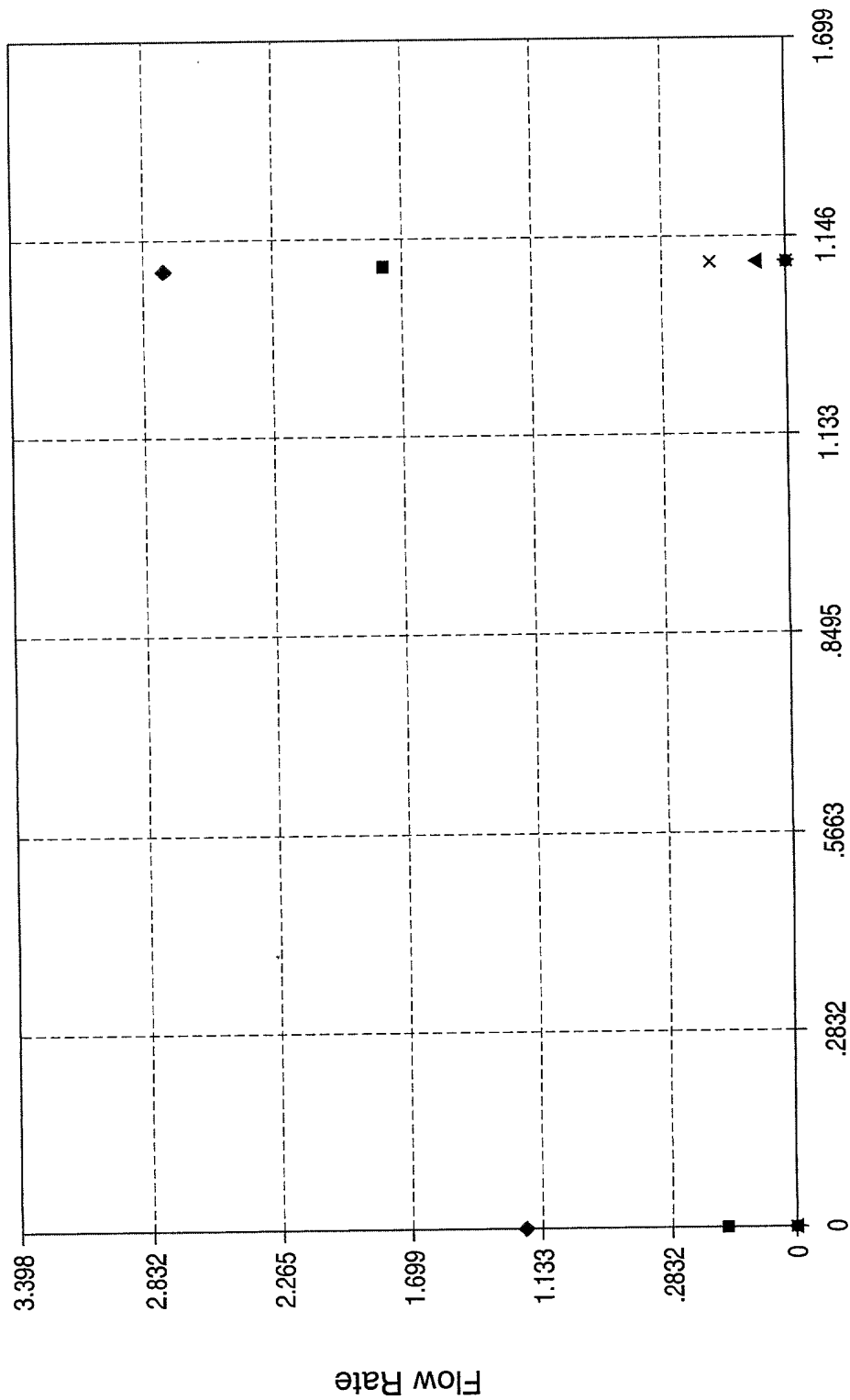


FIG. 156

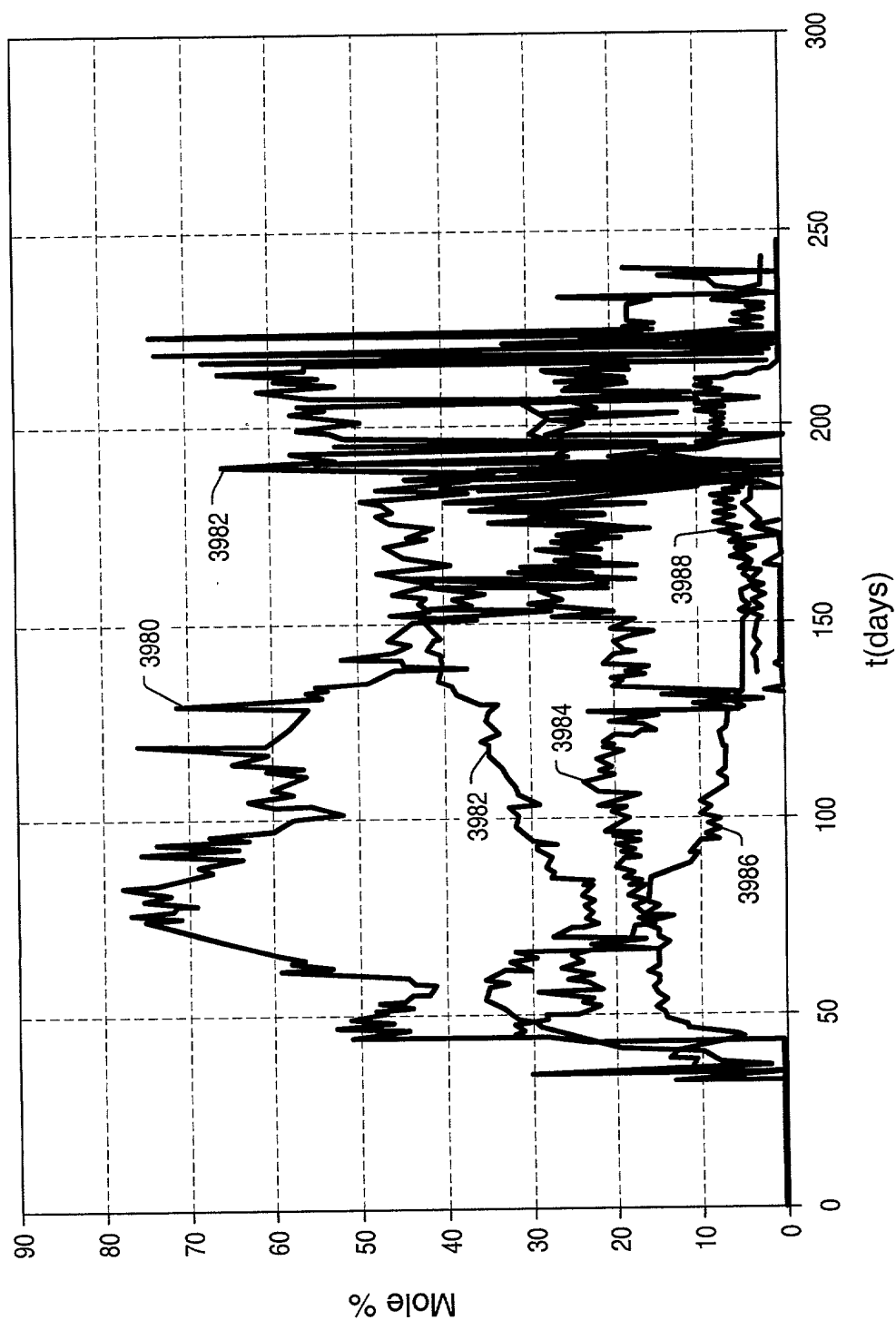


FIG. 157

FIG. 158

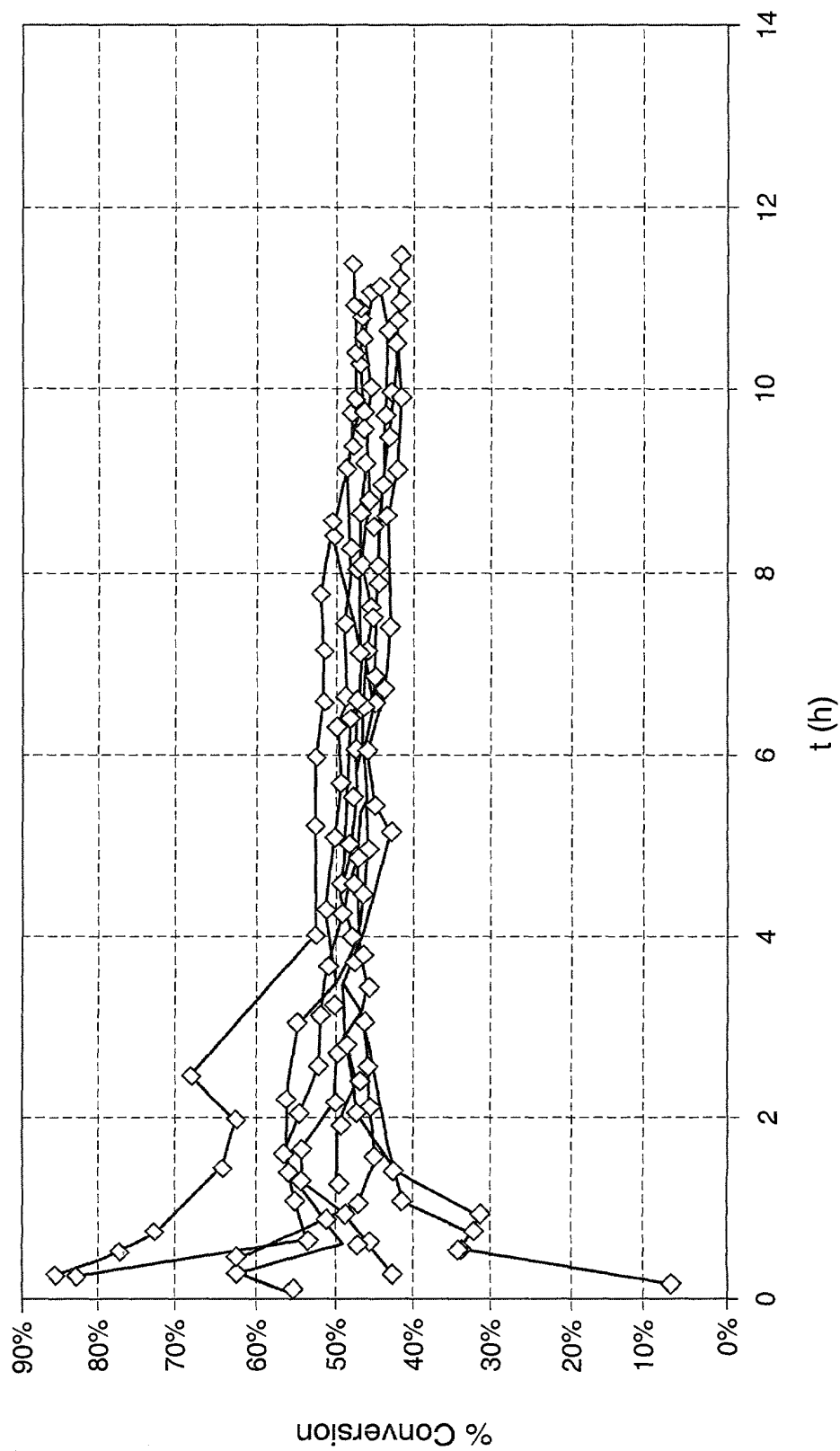


FIG. 158

FIG. 159 is a graph showing the variation of the dry mole fraction of the gas phase with temperature for a mixture of 4000 and 4002. The y-axis represents the Dry Mole Fraction (0 to 0.7) and the x-axis represents Temperature T in degrees Celsius (200 to 1200). The curve for 4000 (solid circles) starts at approximately 0.65 at 200°C, rises to a peak of about 0.68 at 400°C, and then decreases to about 0.55 at 1200°C. The curve for 4002 (open circles) starts at approximately 0.35 at 200°C, rises to a peak of about 0.38 at 400°C, and then decreases to about 0.25 at 1200°C. The two curves intersect at approximately 600°C and a dry mole fraction of 0.35.

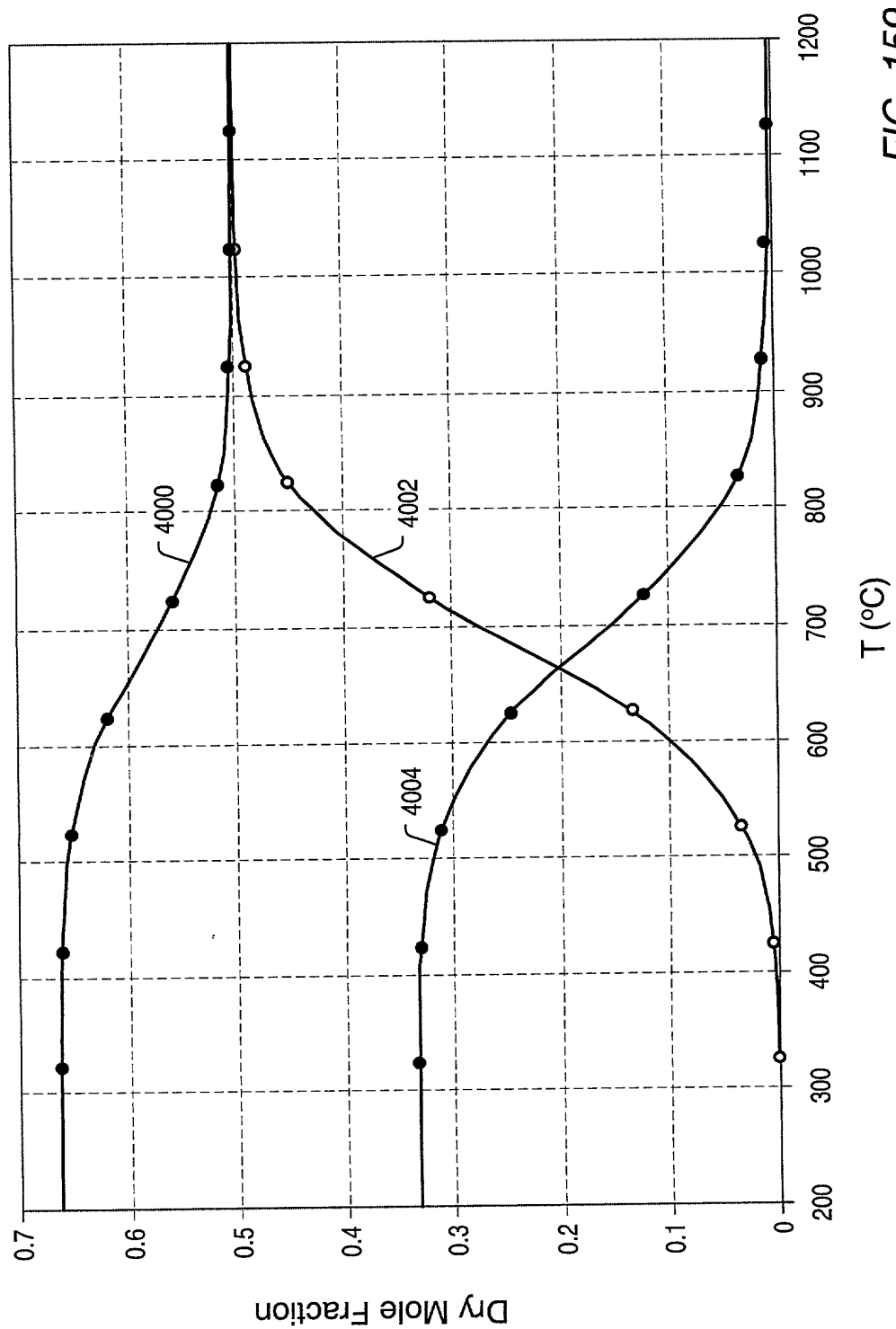


FIG. 159

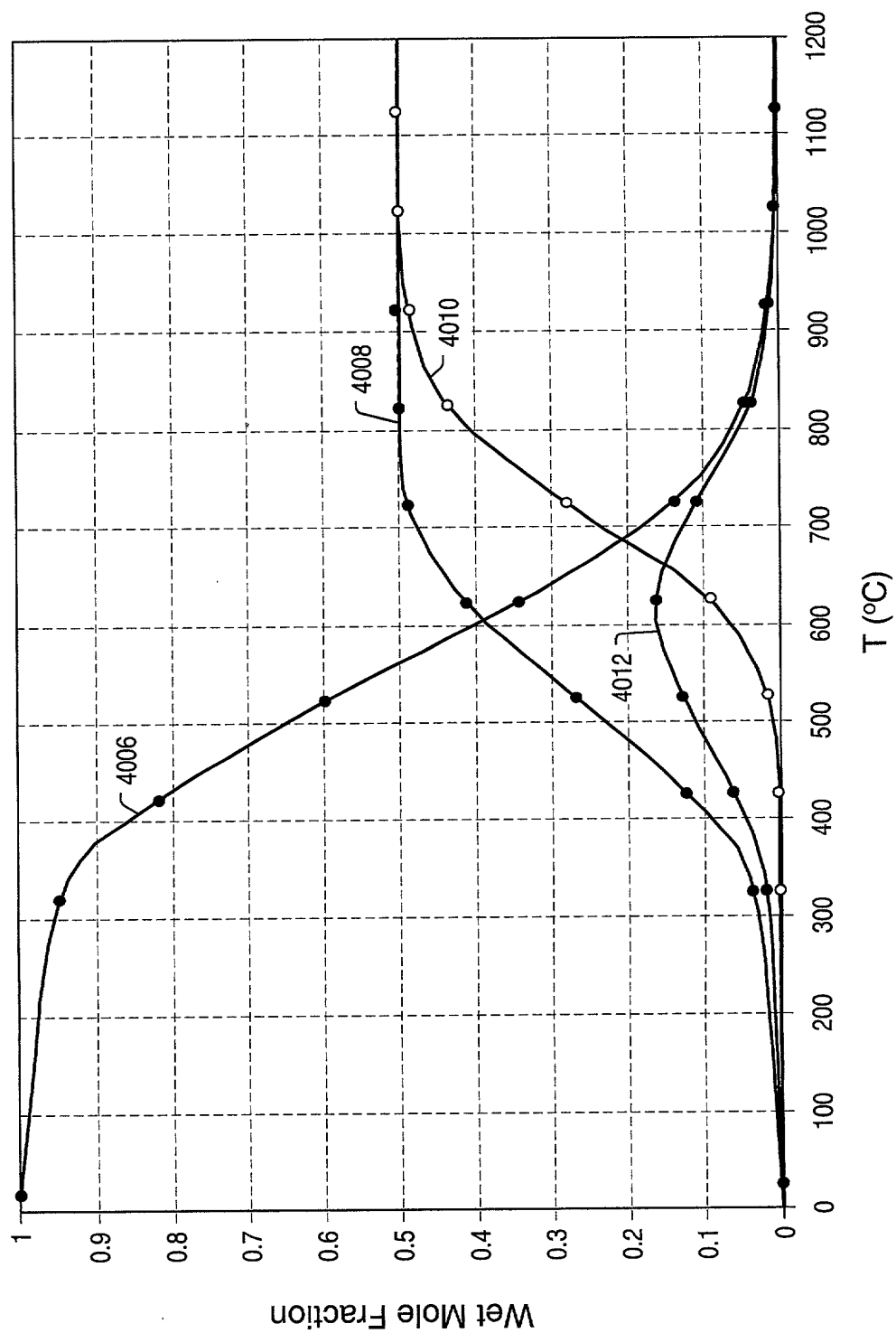
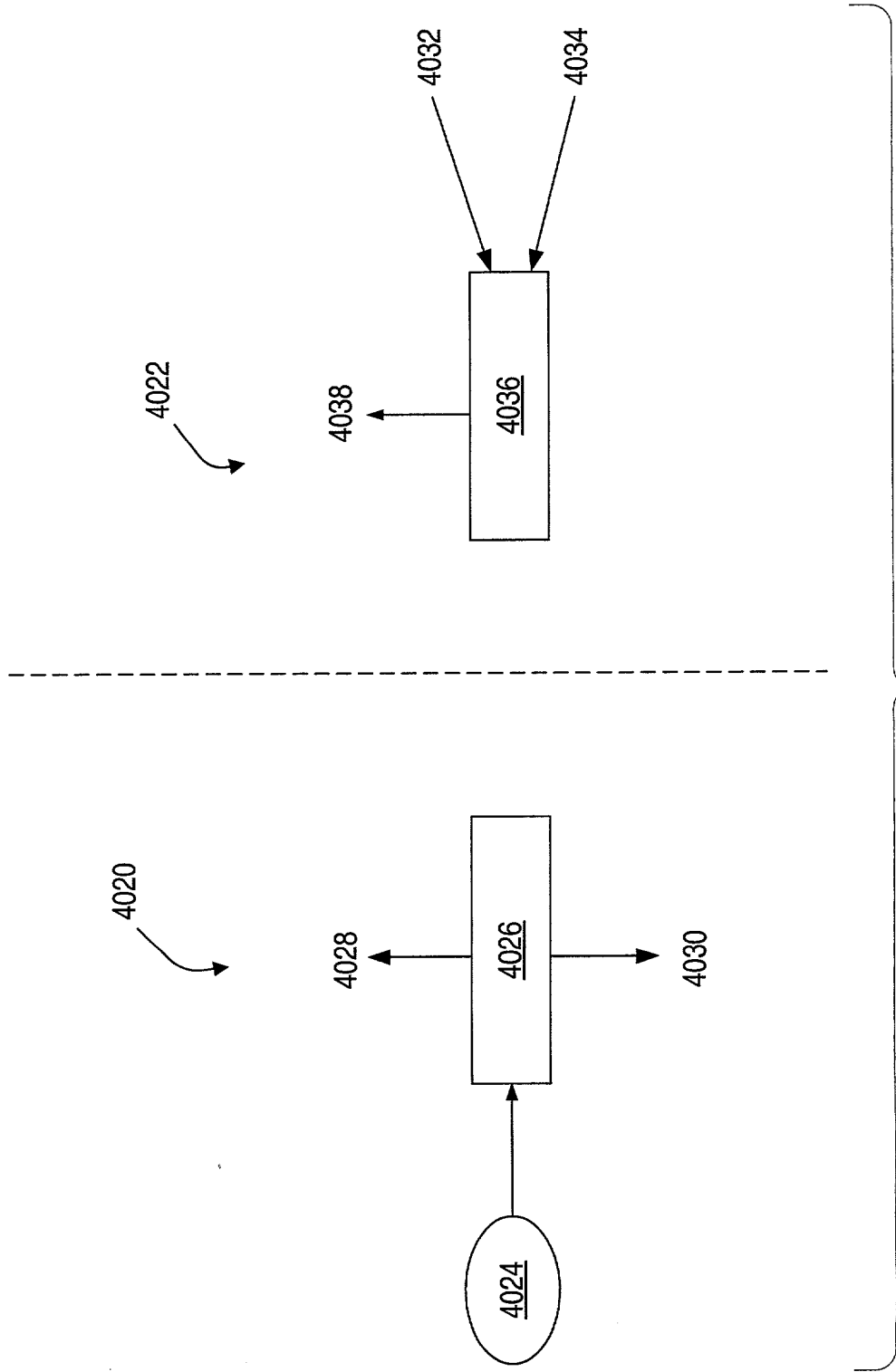


FIG. 160



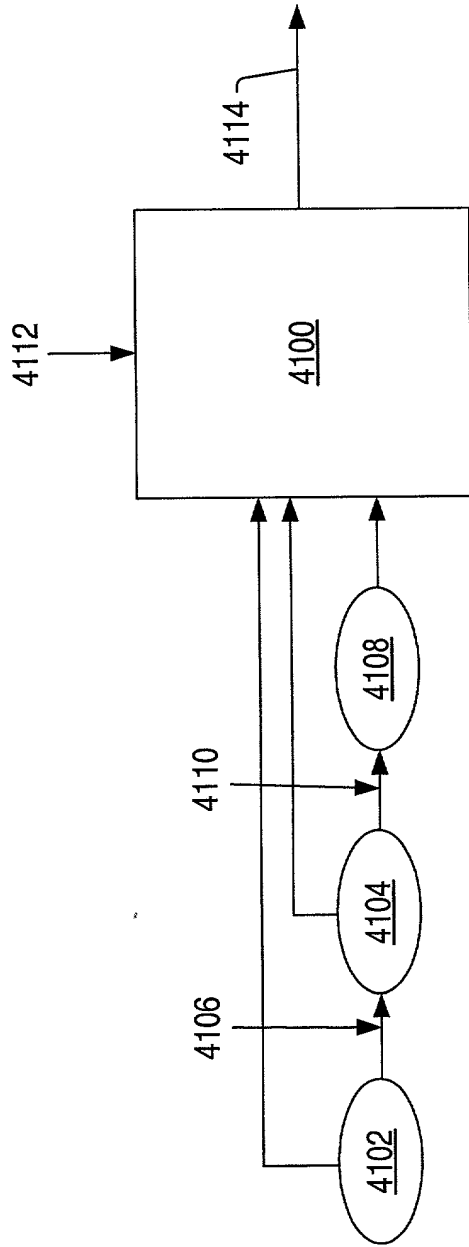


FIG. 162

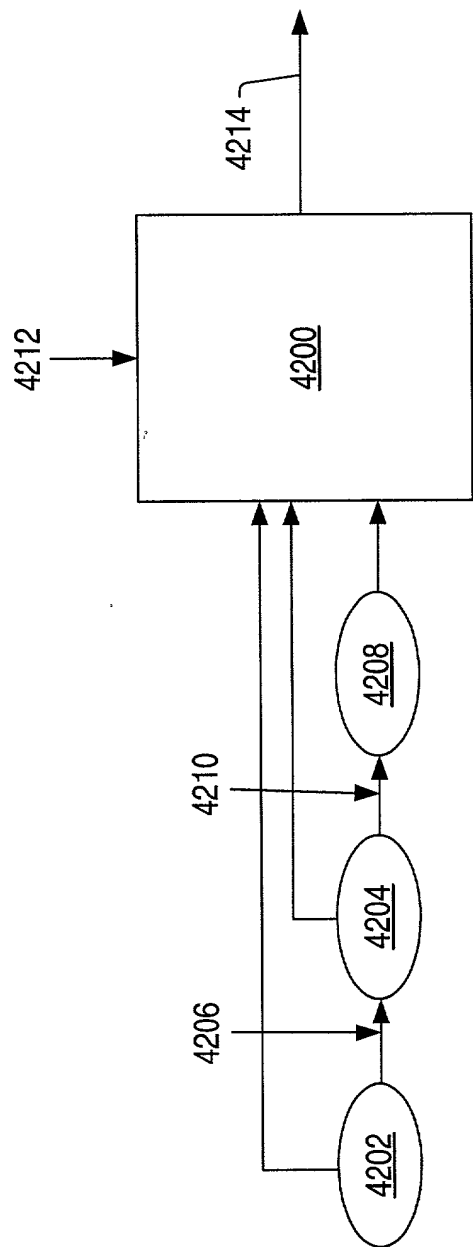


FIG. 163

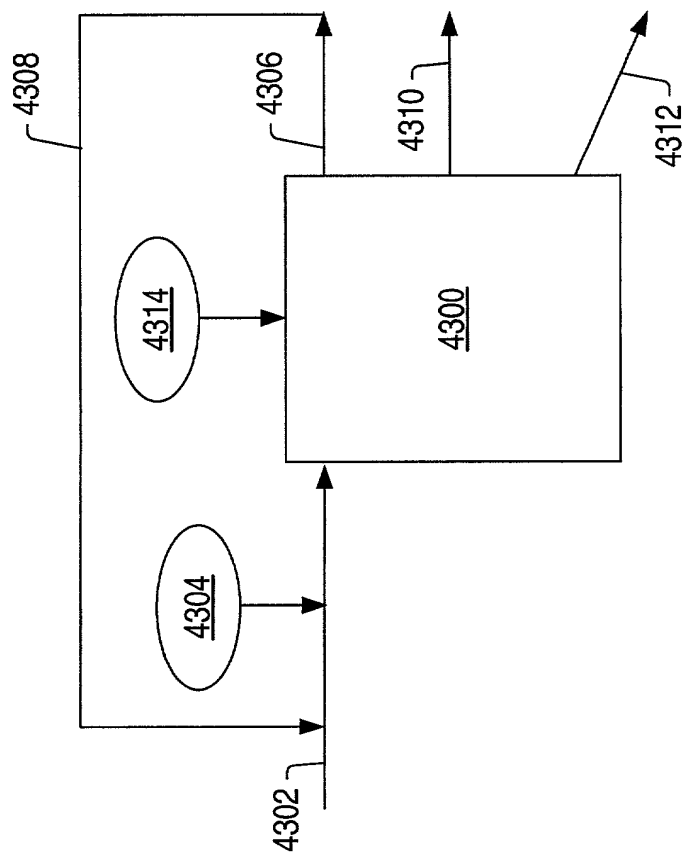


FIG. 164

184.33
 163.85
 143.37
 122.89
 102.41
 81.92
 61.44
 40.96
 20.48
 0.000

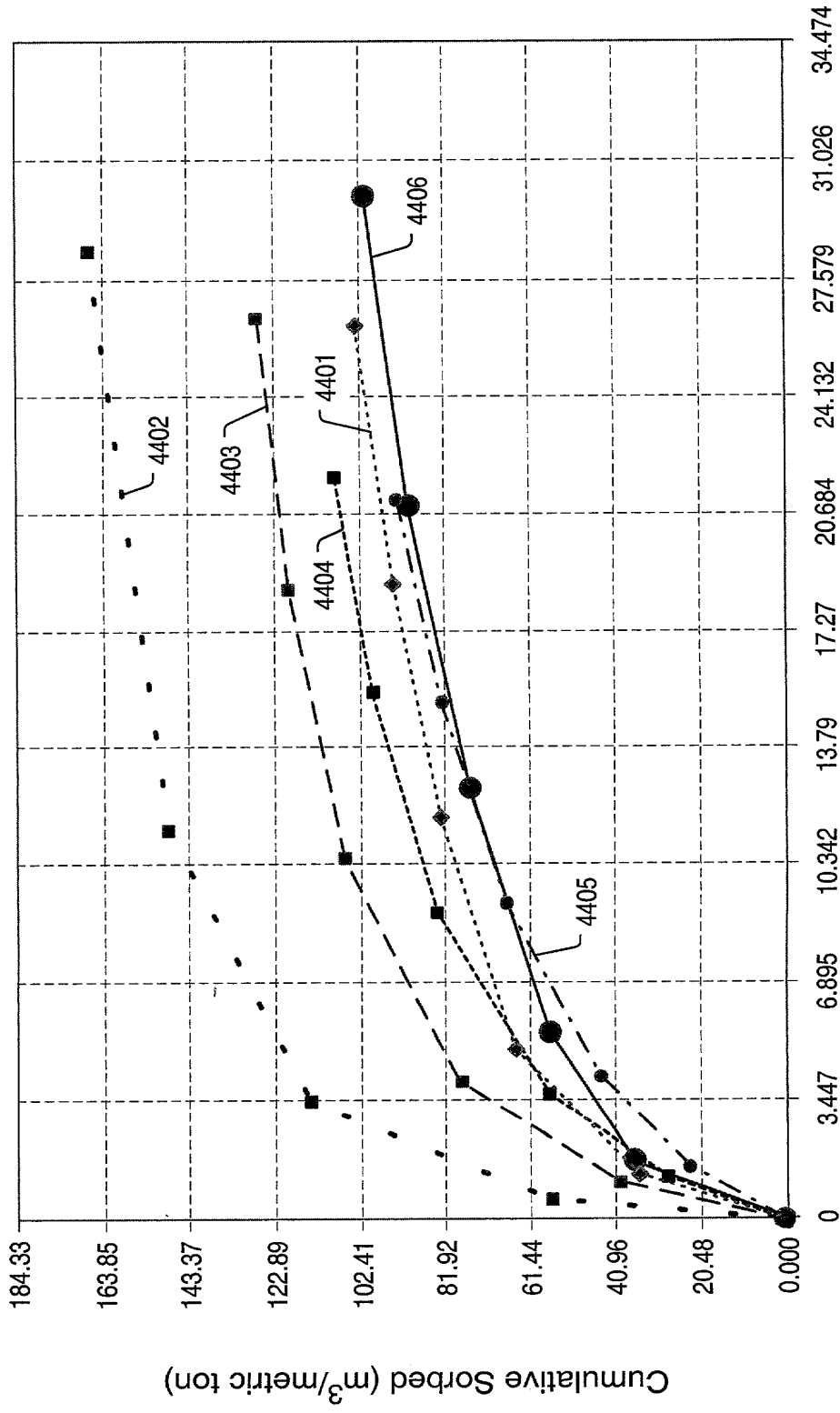


FIG. 165

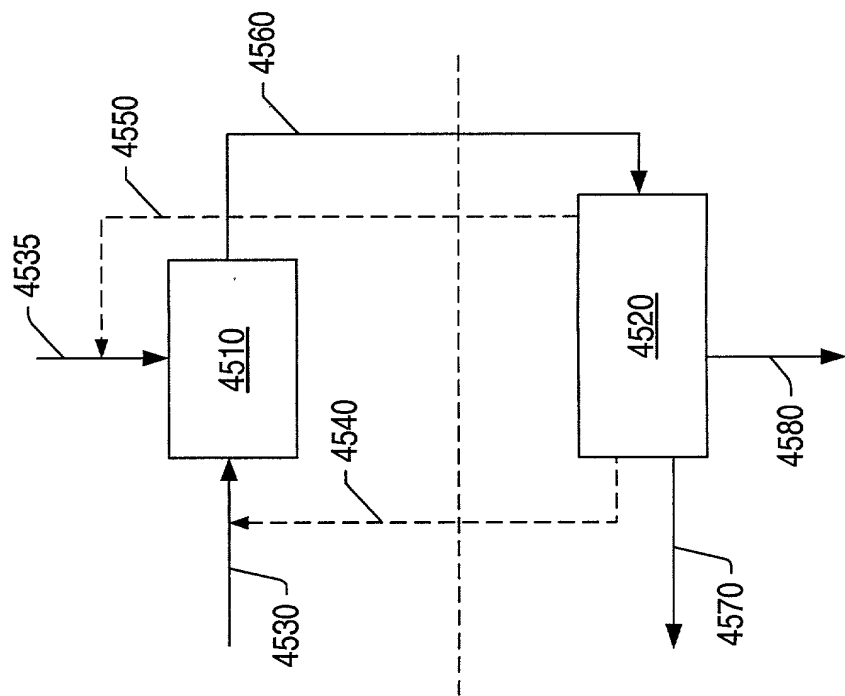


FIG. 166

FIG. 167 is a graph showing the component fraction (%) of component 4601 as a function of time (days) for the system 4600. The graph shows the component fraction of component 4601 as a function of time (days) for the system 4600. The graph shows the component fraction of component 4601 as a function of time (days) for the system 4600.

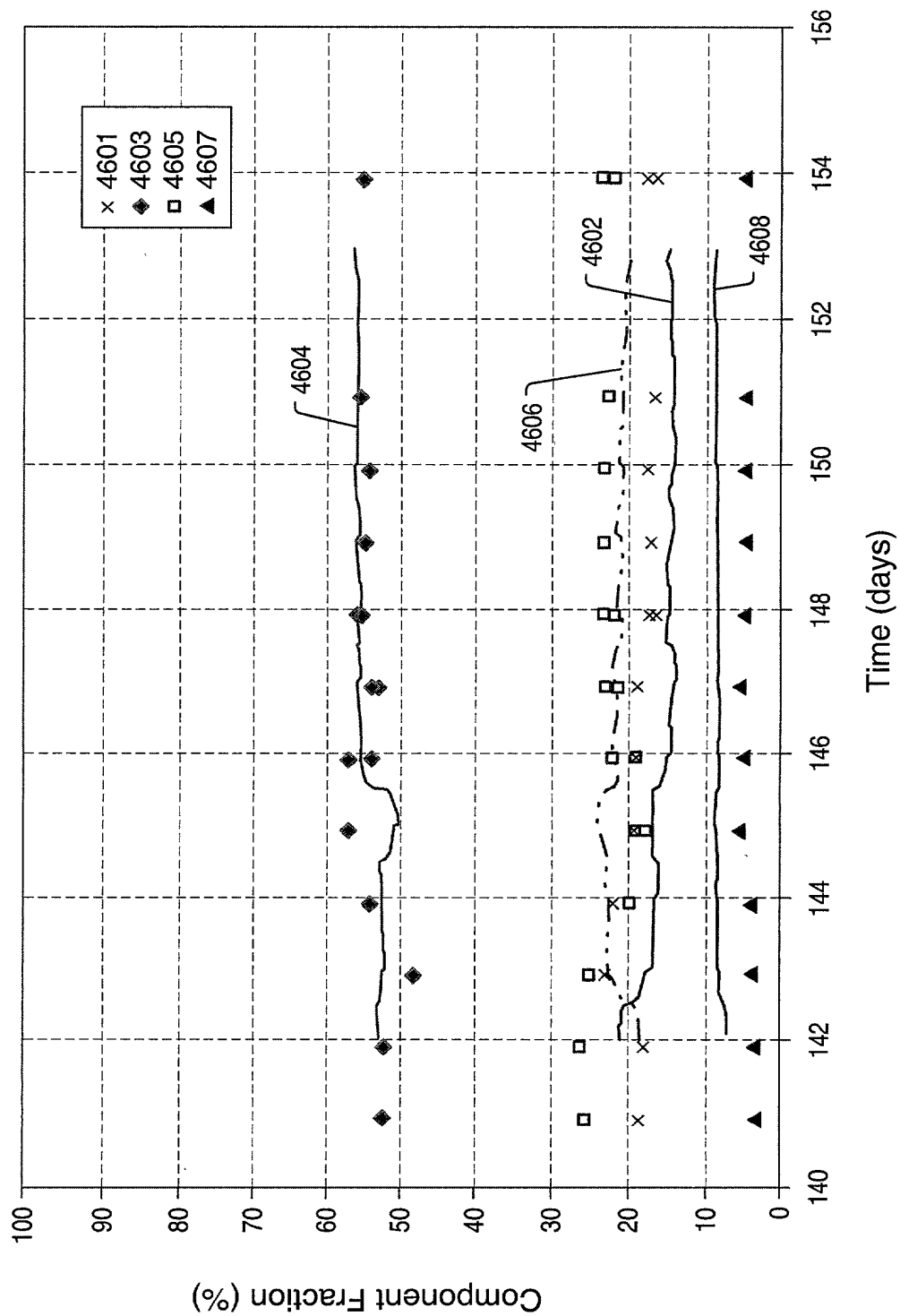


FIG. 167

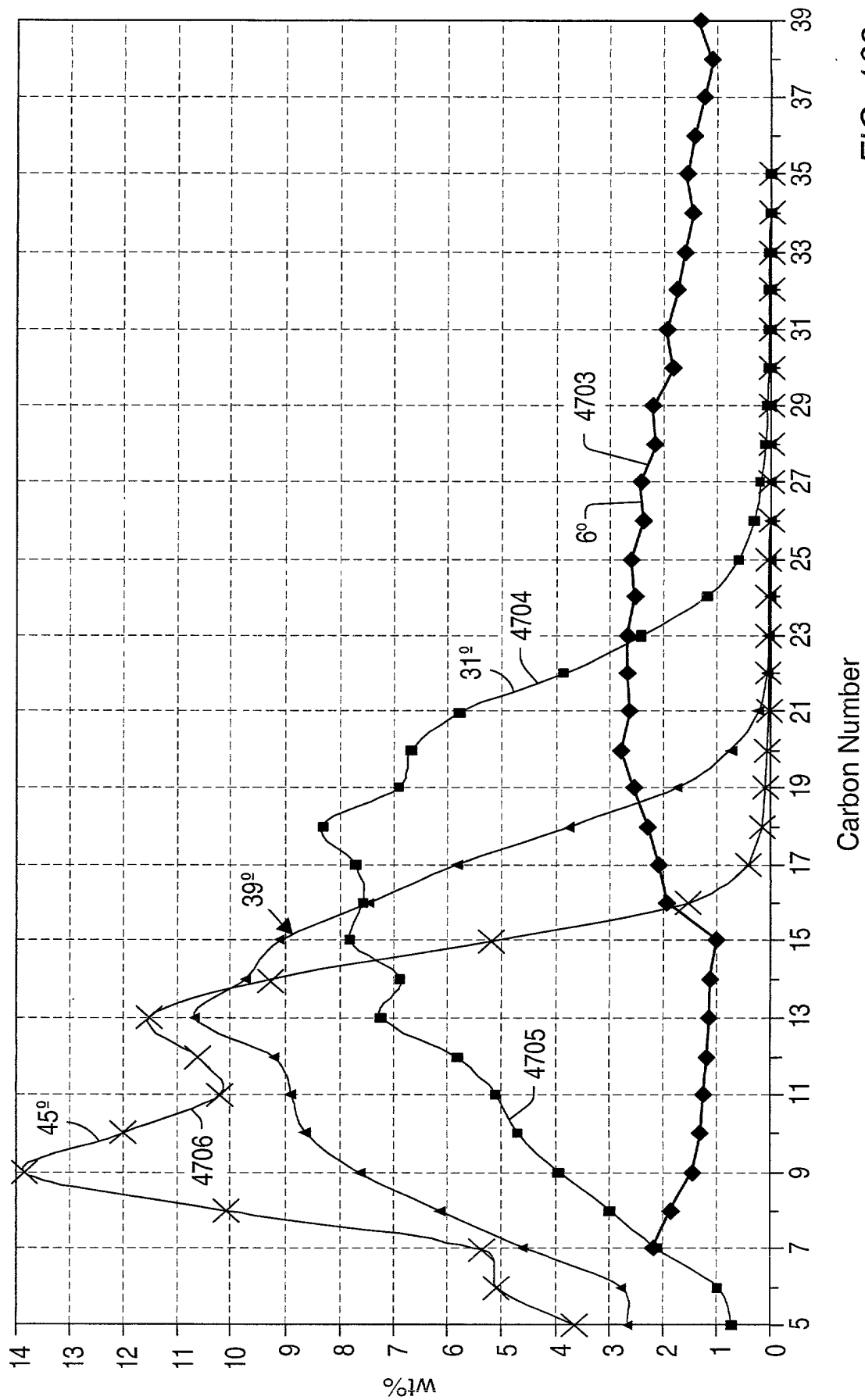


FIG. 168

4710 4712 4714 4716 4720 4722 4724 4726 4728
 30.5° 30.9° 30.7° 39.2°
 19 14 15 27 20 22 21 17 9

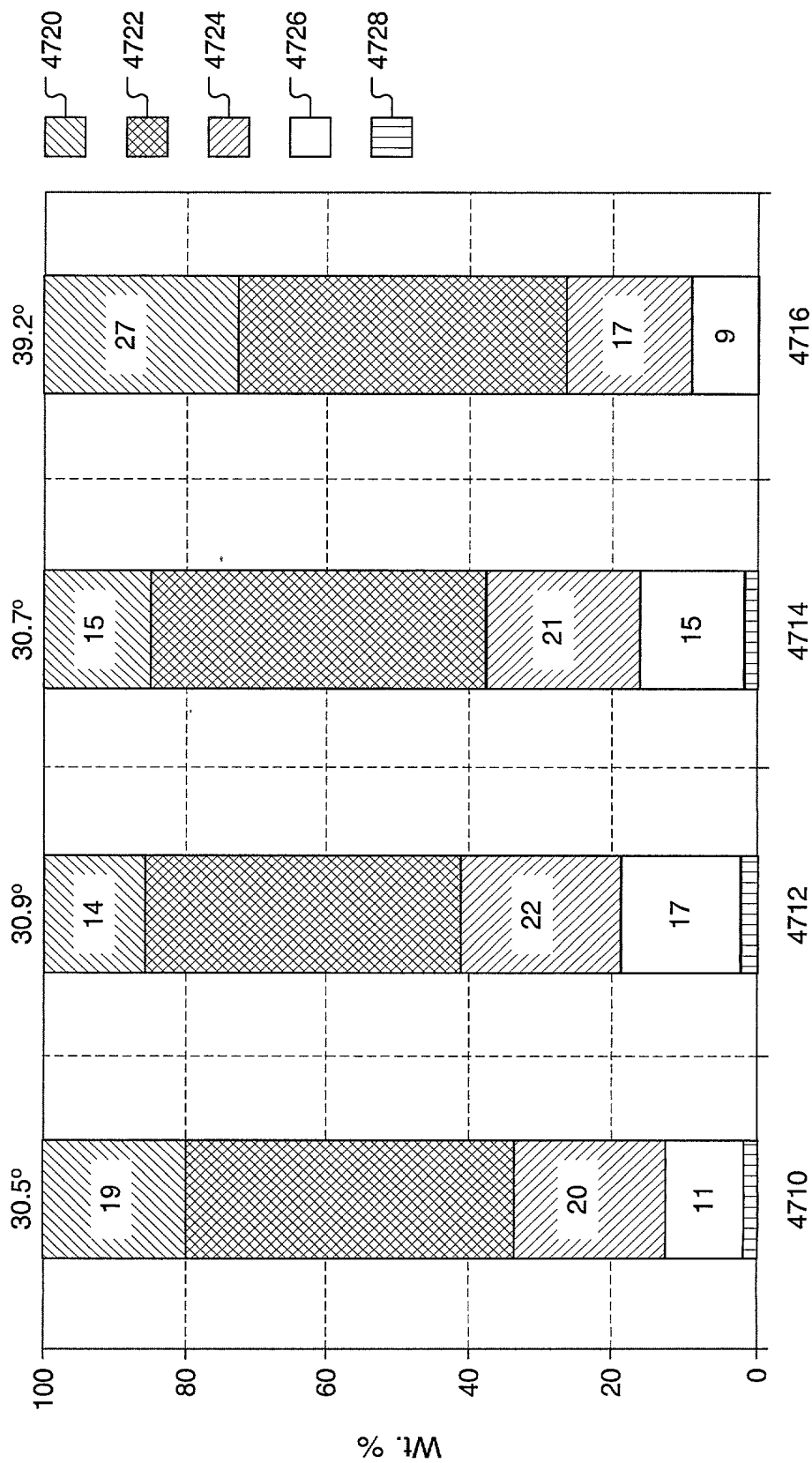


FIG. 169

FIG. 170 is a graph showing the relationship between the volume of water (M³) and time (days) for a specific system. The graph displays two curves, one labeled 4742 and the other 4740, representing different scenarios or parameters. The x-axis represents time in days, ranging from 0 to 2001, with major grid lines every 500 days. The y-axis represents volume in M³, ranging from 0 to 3975, with major grid lines every 795 M³. Both curves start at (0,0) and show an initial rapid increase in volume, followed by a period of slower growth. Curve 4742 reaches a higher volume than curve 4740 by day 1000. Both curves show a slight decrease in volume after day 1000, with curve 4740 showing a more pronounced drop around day 1500.

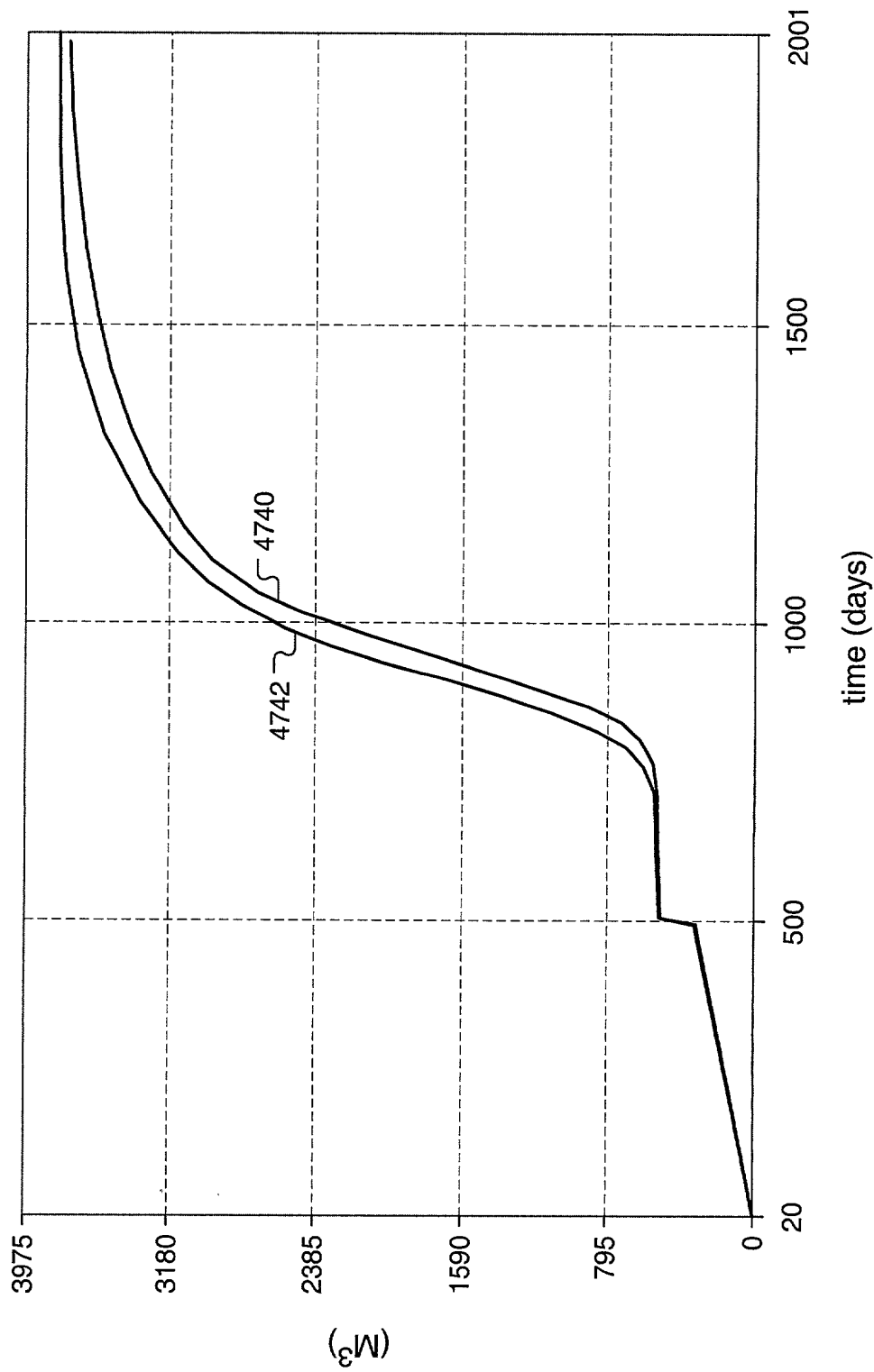


FIG. 170

FIG. 171

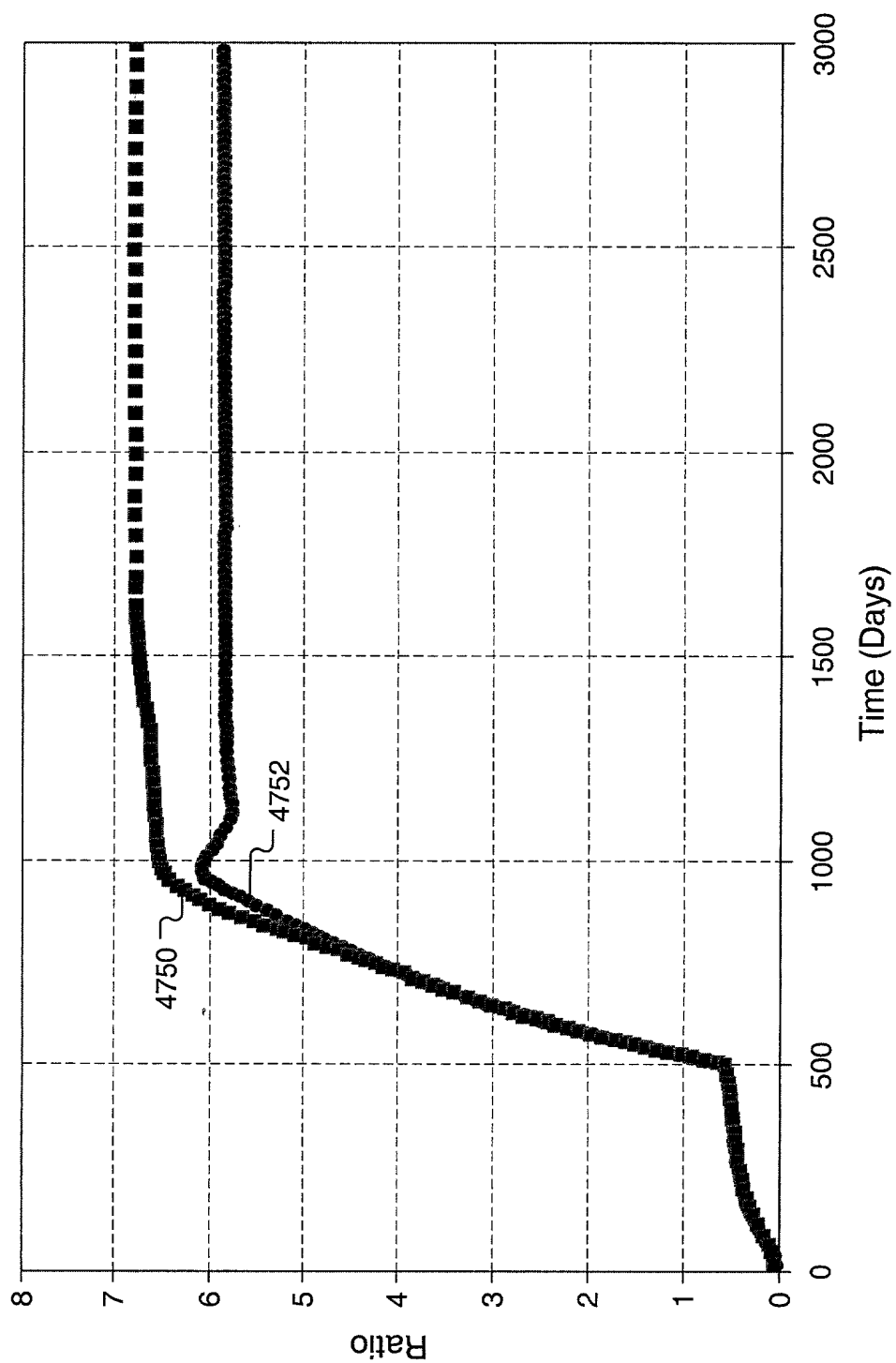


FIG. 171

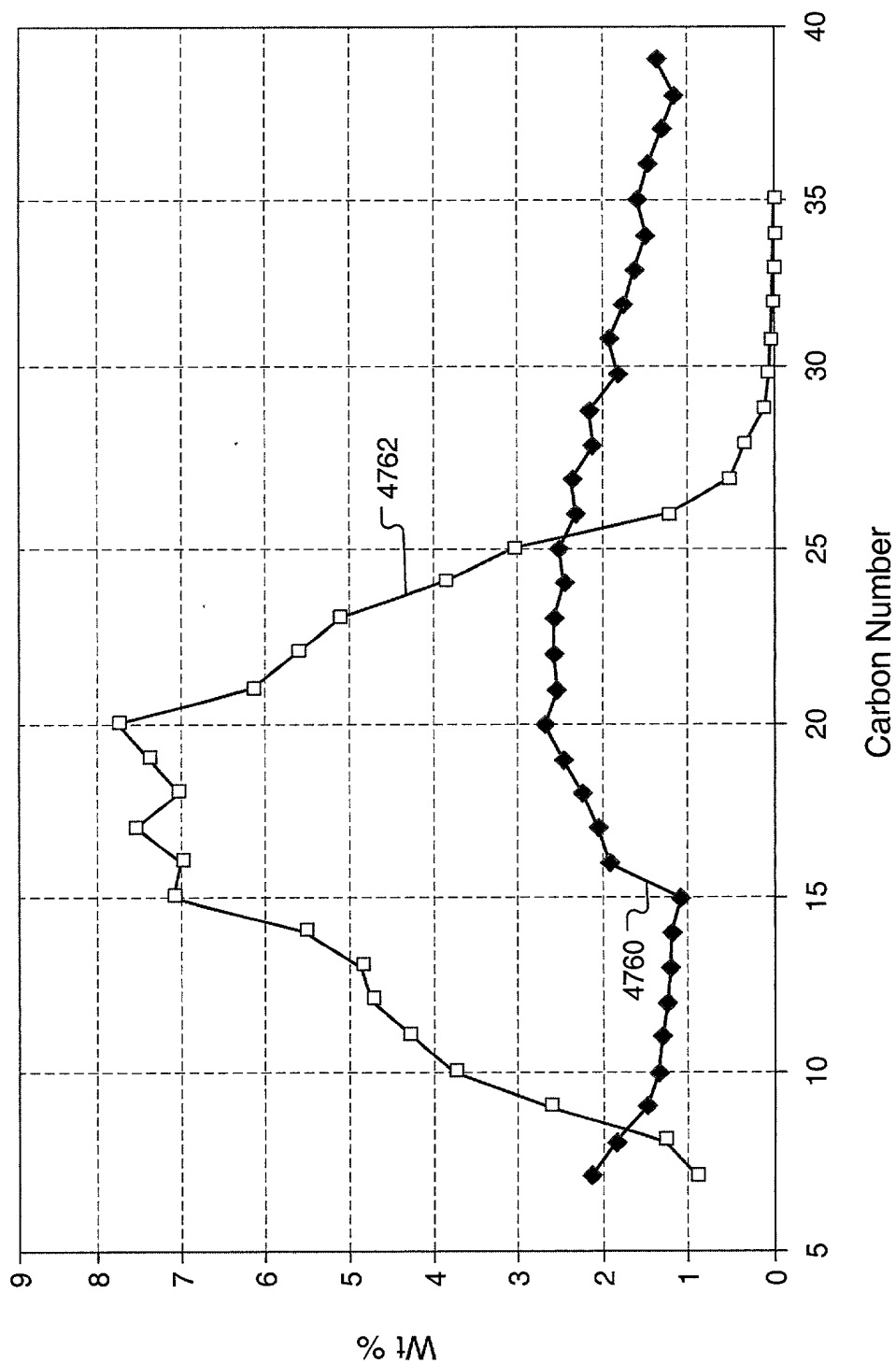


FIG. 172

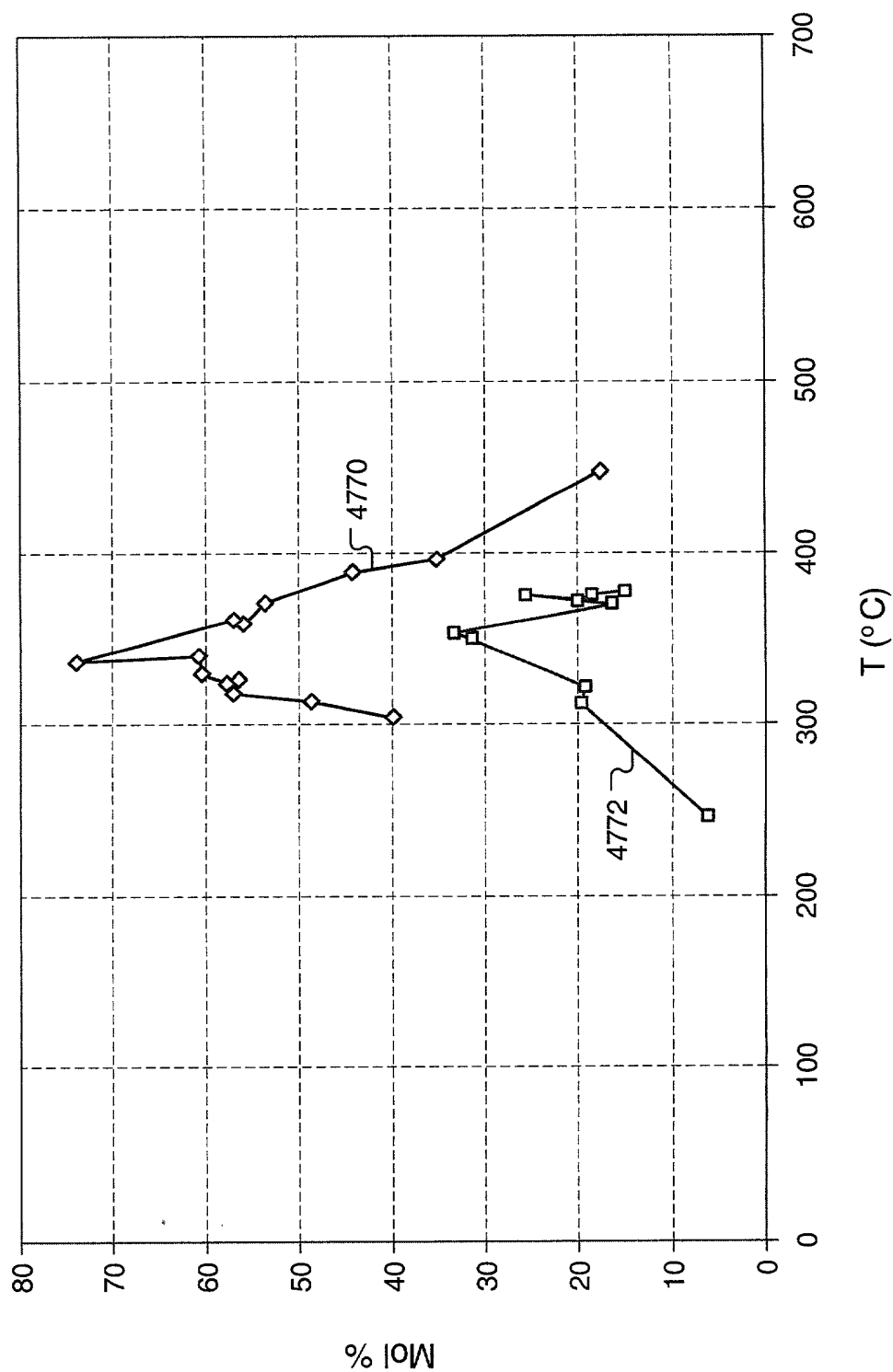


FIG. 173

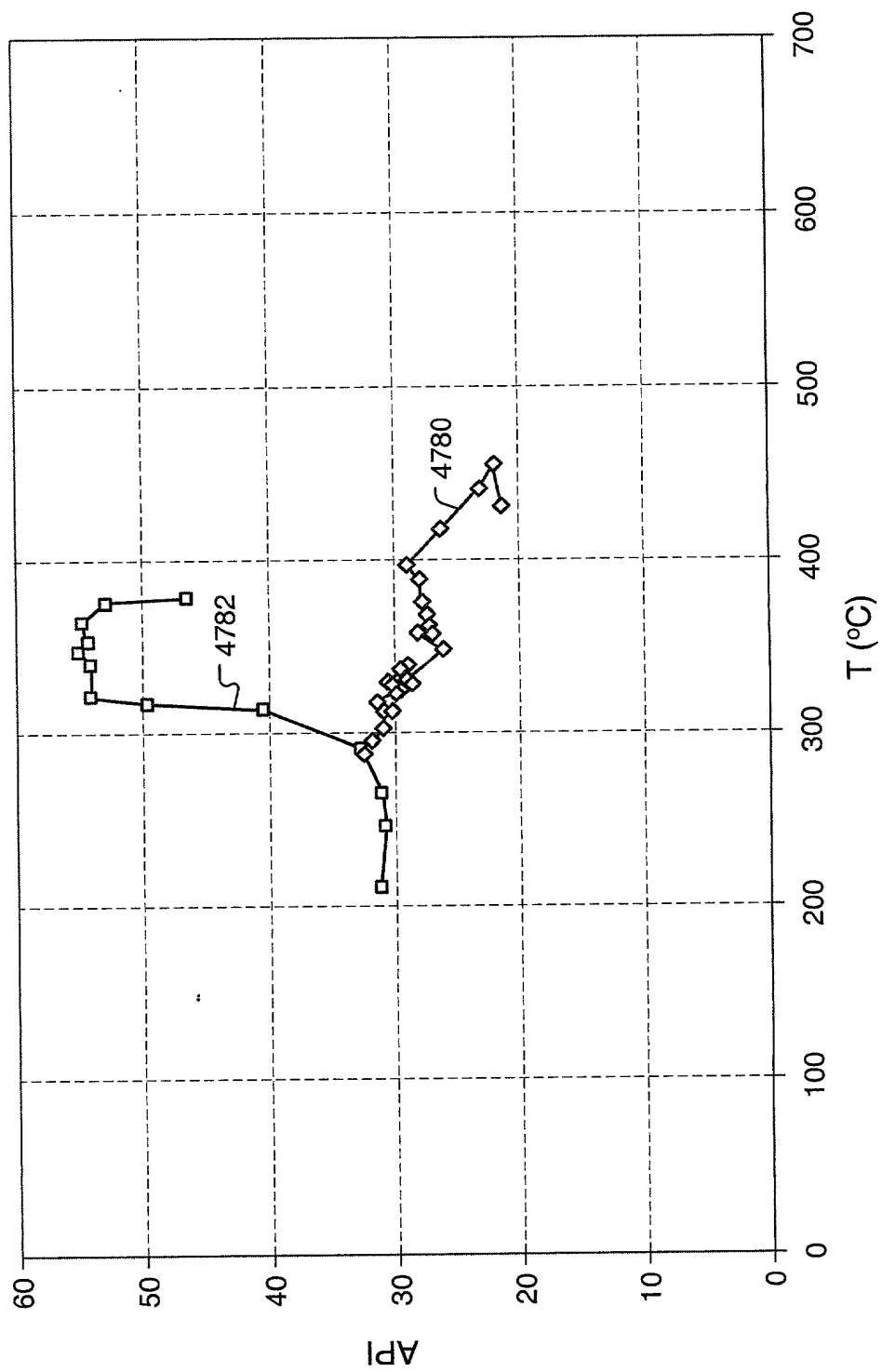
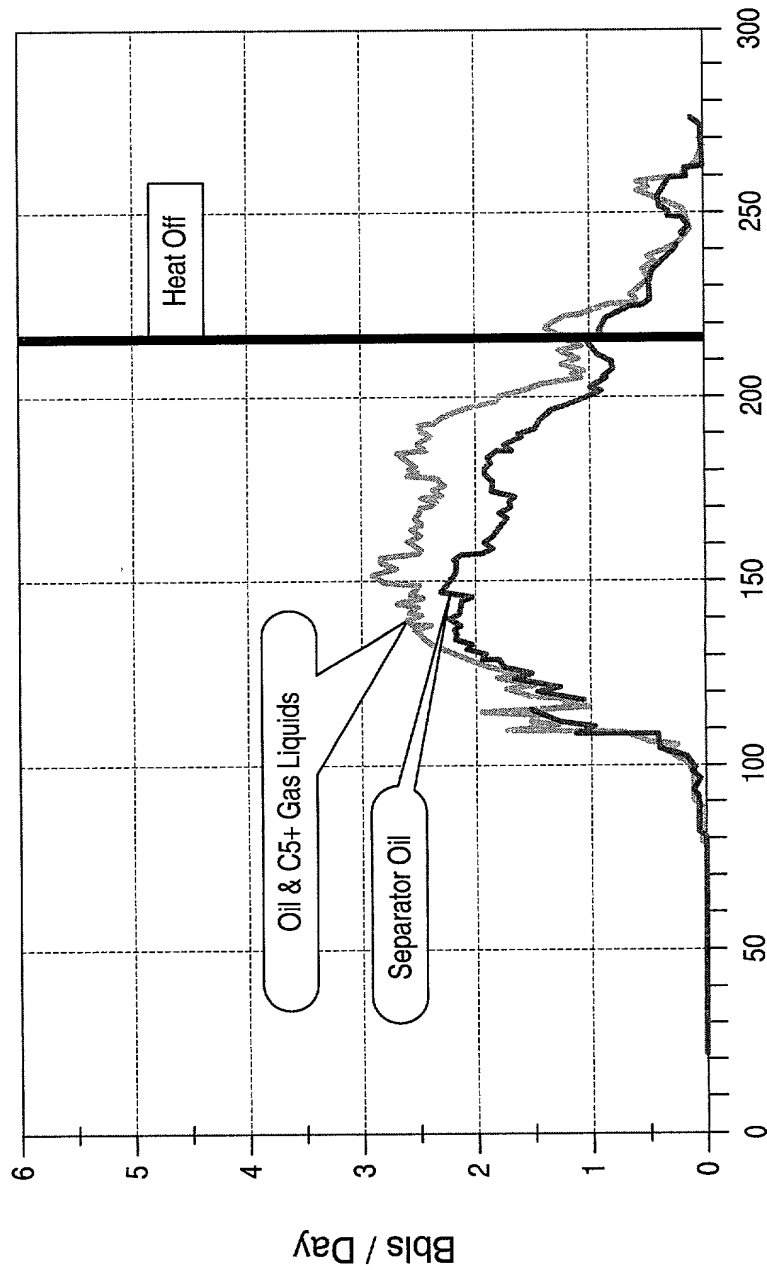


FIG. 174

FIG. 175 is a line graph showing the flow rate of oil and gas liquids and separator oil over time. The y-axis is labeled "Bbls / Day" and ranges from 0 to 6. The x-axis is labeled "Days From Start of Heat Injection" and ranges from 0 to 300. A vertical line at approximately day 200 is labeled "Heat Off". Two data series are plotted: "Oil & C5+ Gas Liquids" (represented by a solid line) and "Separator Oil" (represented by a dashed line). Both series show a sharp increase in flow rate around day 100, peaking around day 150, and then gradually declining. The "Oil & C5+ Gas Liquids" flow rate is consistently higher than the "Separator Oil" flow rate.



Days From Start of Heat Injection

FIG. 175

FIG. 176

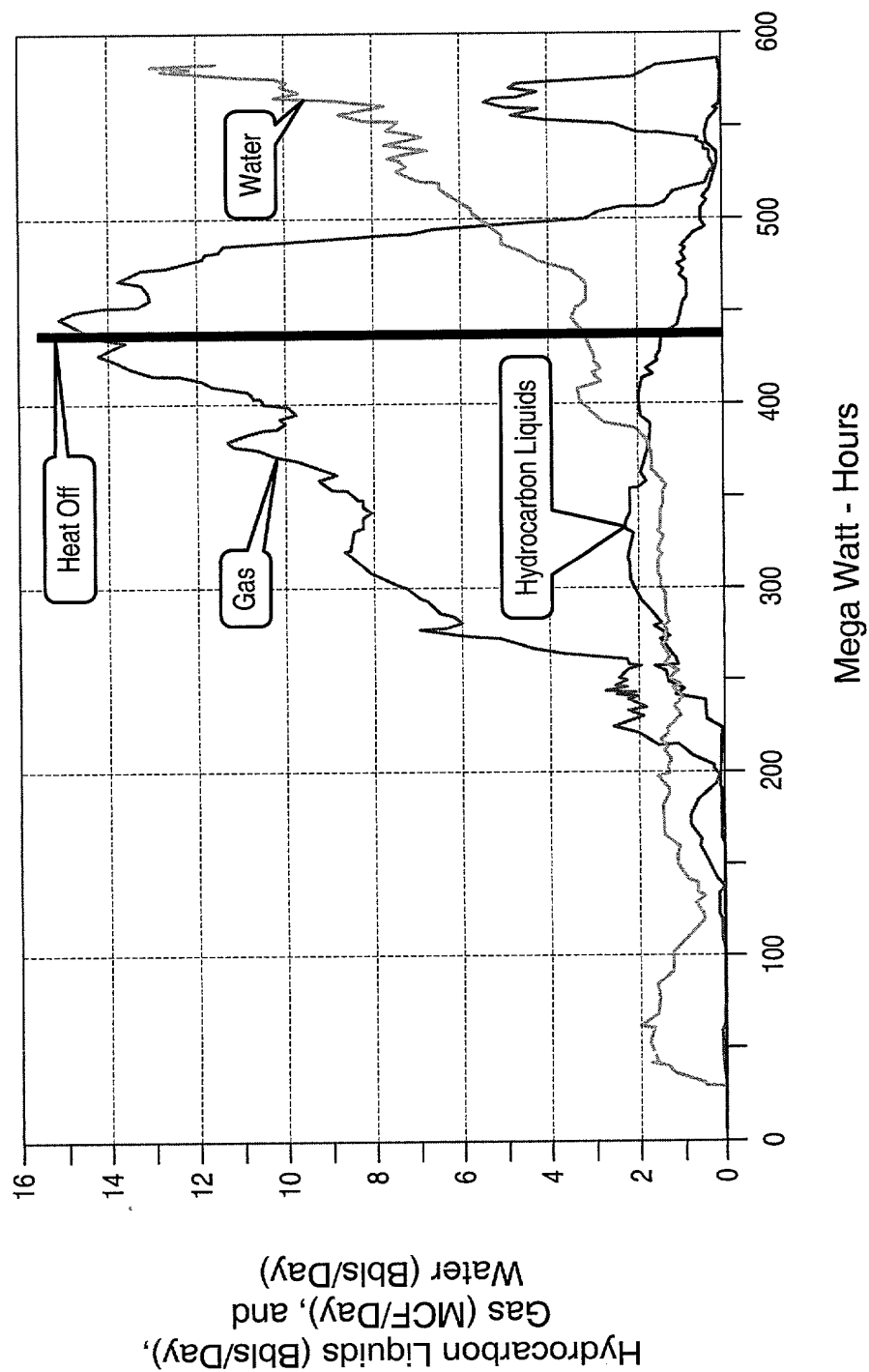


FIG. 176

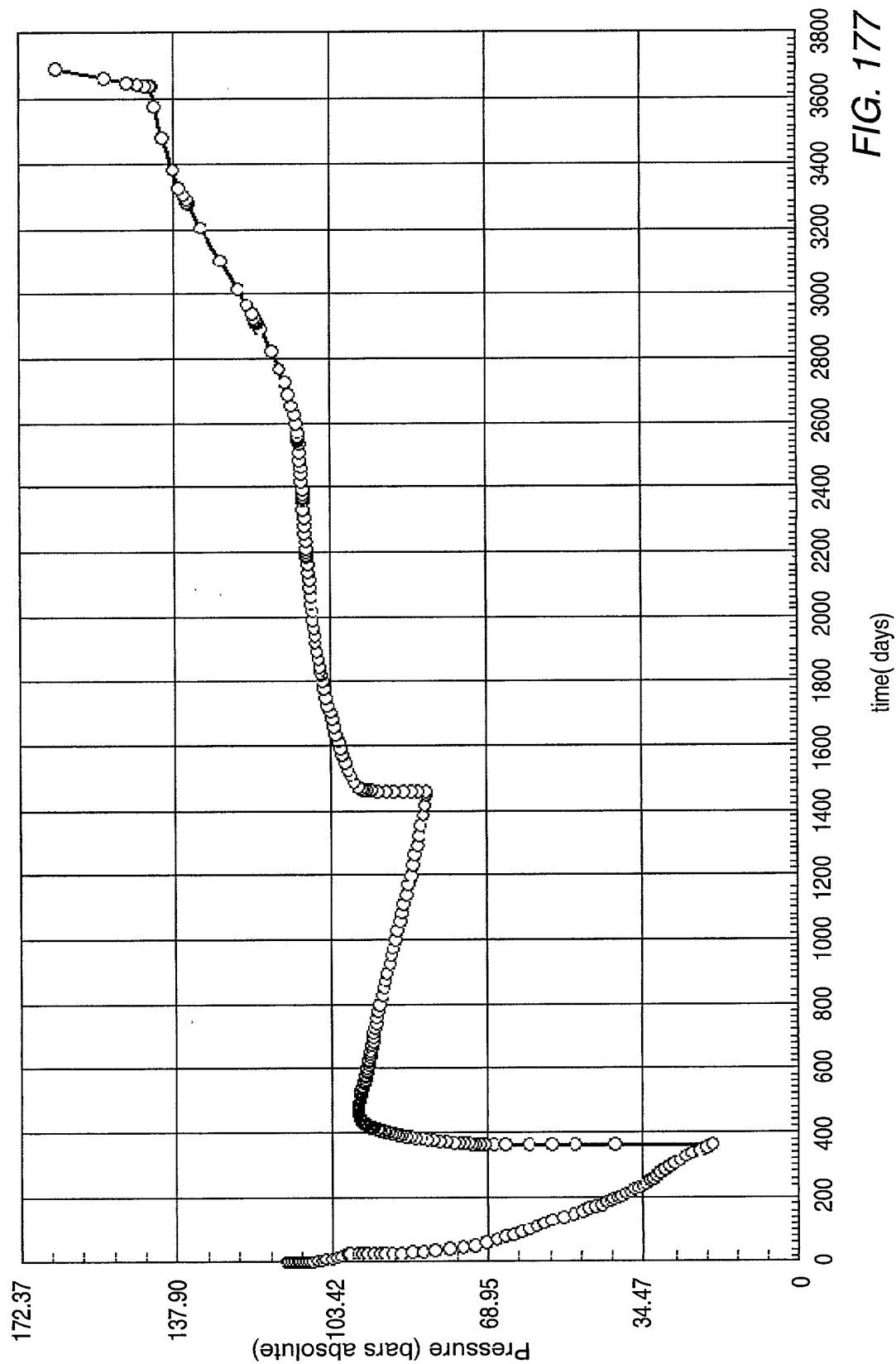


FIG. 177

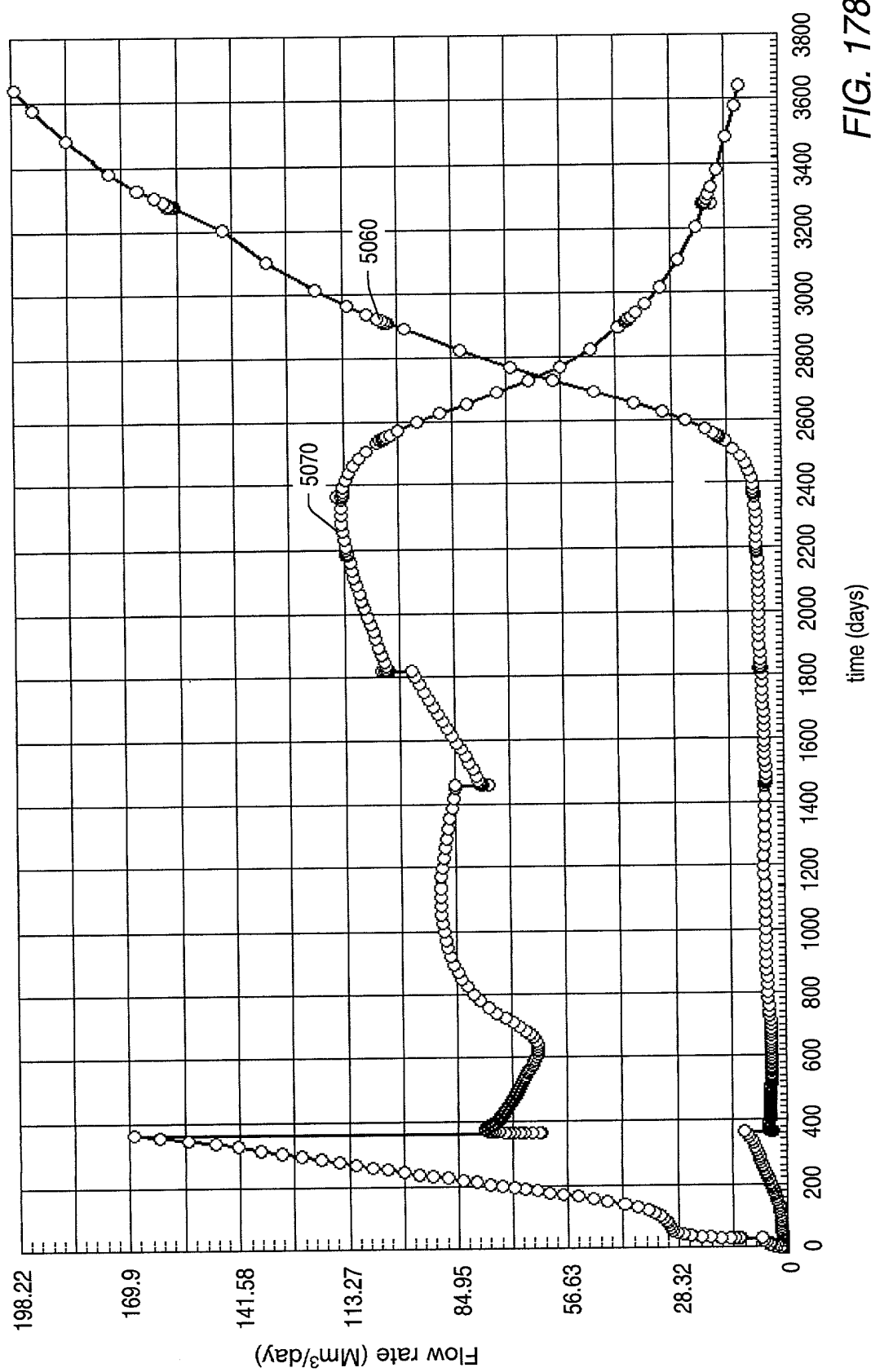


FIG. 178

FIG. 179

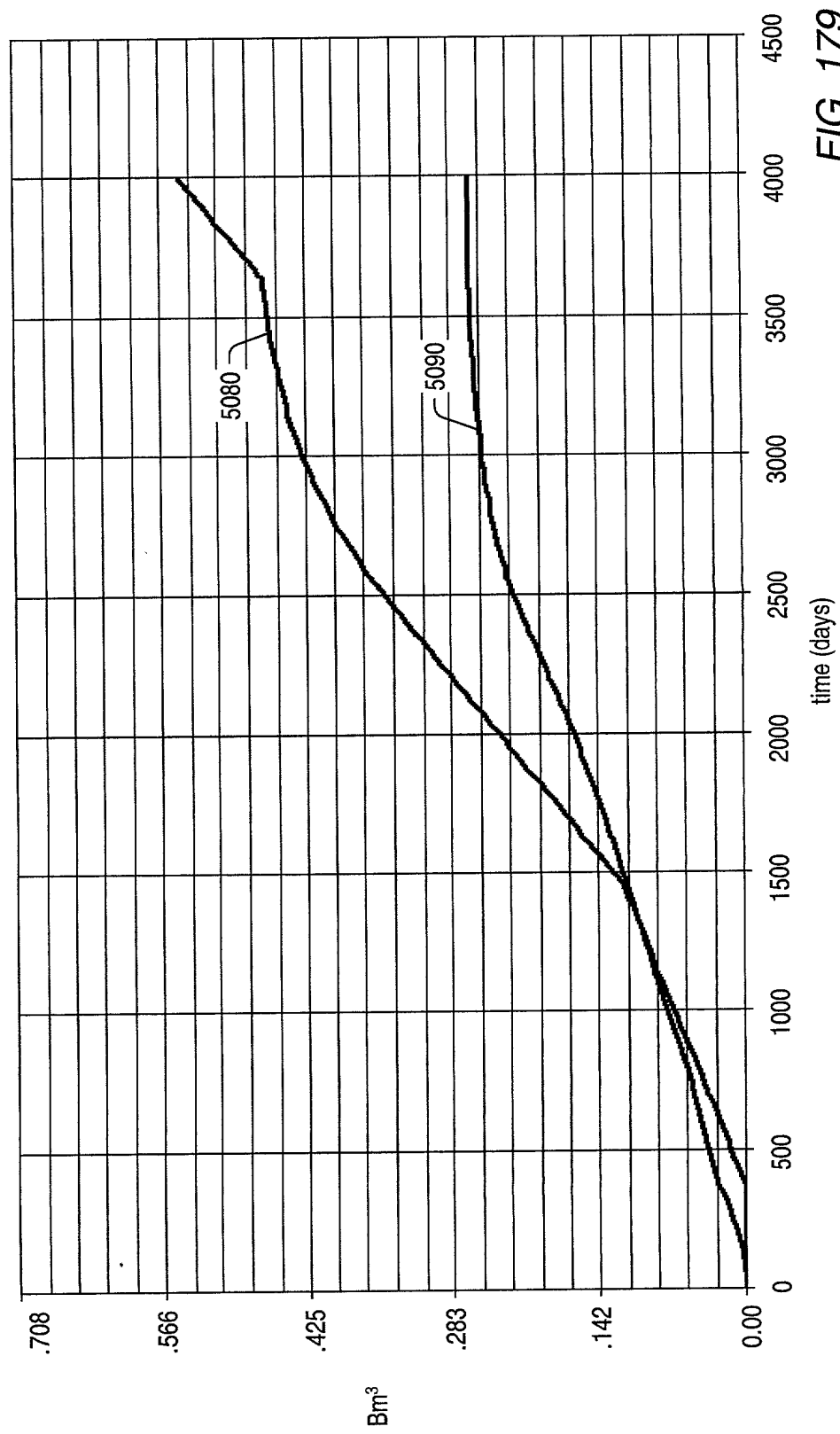


FIG. 179

Pressure (bars absolute) vs. time (days)

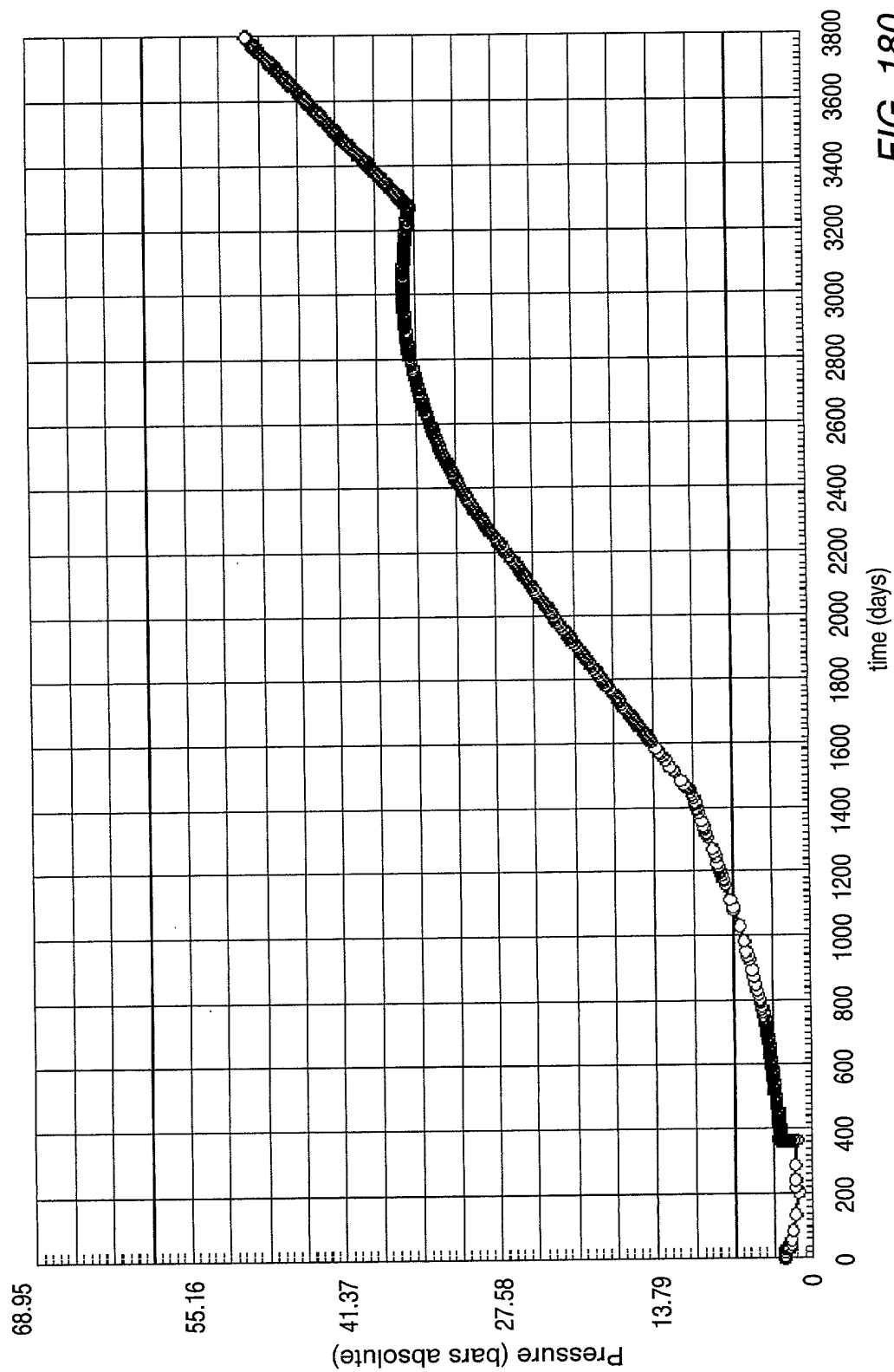


FIG. 180

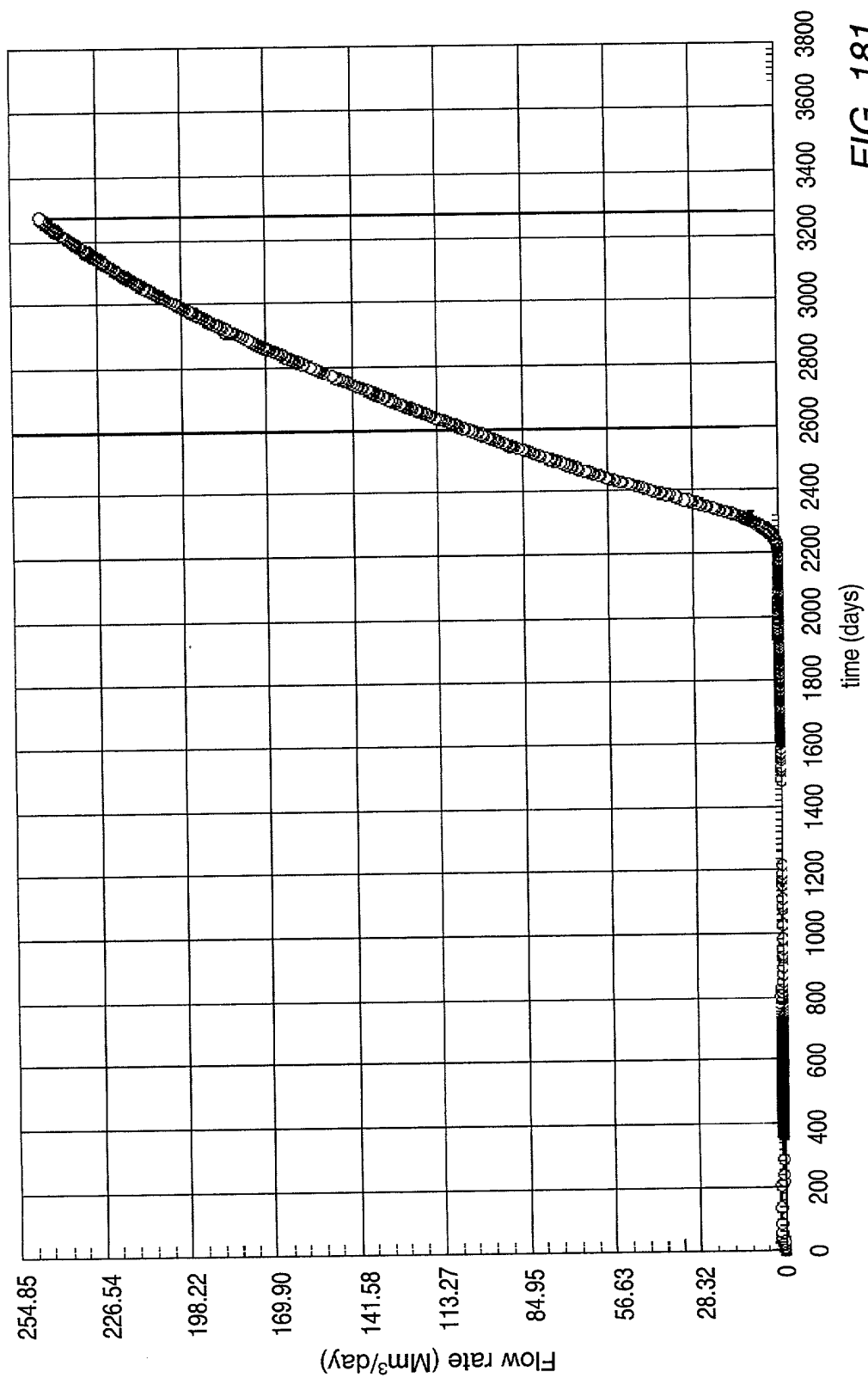


FIG. 181

FIG. 182

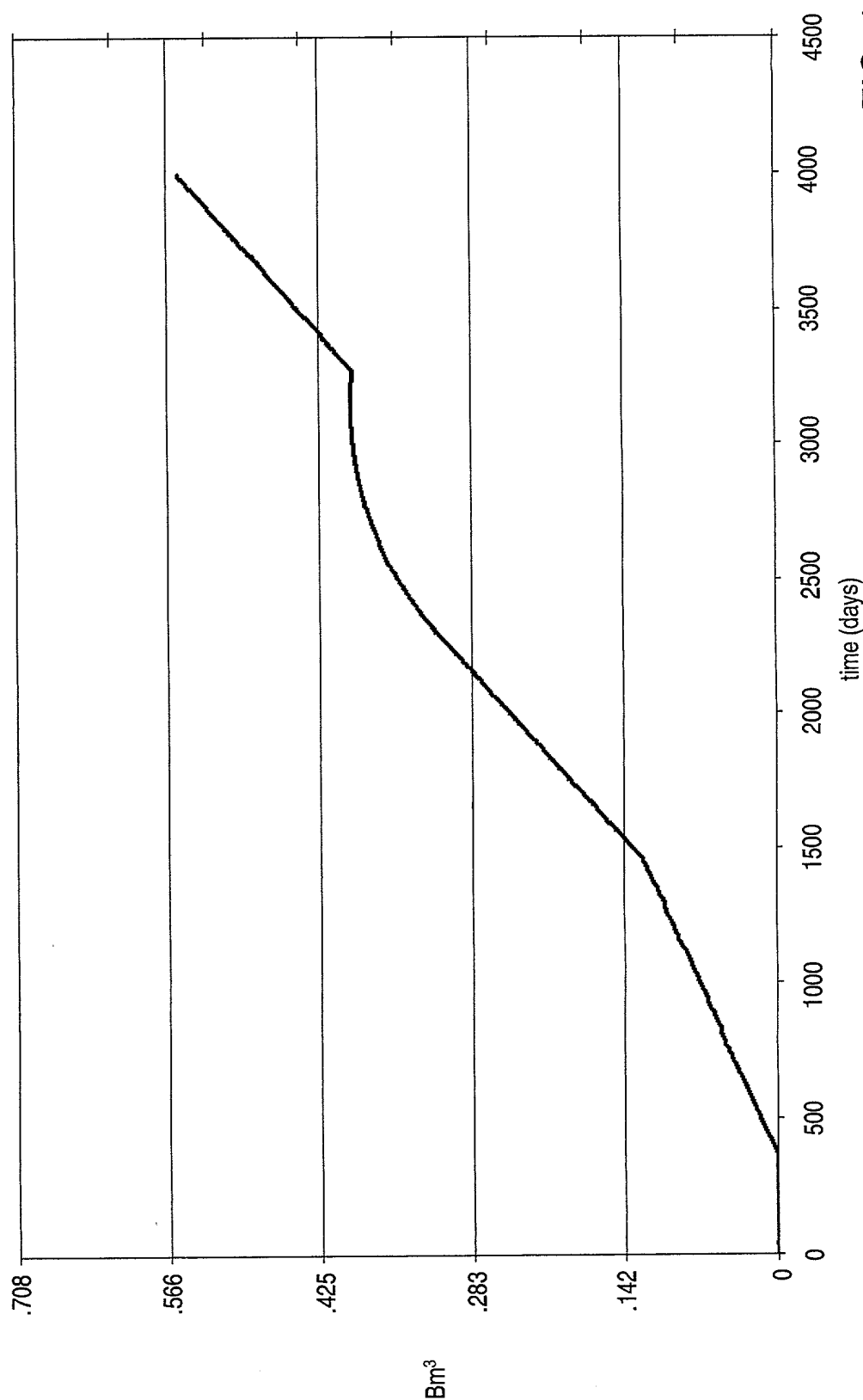


FIG. 182